Commonwealth of Kentucky
Energy and Environment Cabinet
Department for Environmental Protection
Division for Air Quality
200 Fair Oaks Lane, 1st Floor
Frankfort, Kentucky 40601
(502) 564-3999

Draft

AIR QUALITY PERMIT

Issued under 401 KAR 52:020

Permittee Name:	**Louisville Gas & Electric Co. (E.ON US LLC)**
Mailing Address:	**220 West Main St. (P.O. Box 32010), Louisville, KY 40232**
Source Name:	**Trimble County Generating Station**
Mailing Address:	**487 Corn Creek Road Bedford, KY 40006**
Source Location:	**487 Corn Creek Road**
Permit:	**V-08-001**
Agency Interest:	**4054**
Activity:	**APE20070006**
Review Type:	**Title V Construction/Operating**
Source ID:	**21-223-00002**
Regional Office:	**Florence Regional Office 8020 Veterans Memorial Drive, Suite 110 Florence, KY 41042 (859) 525-4923**
County:	**Trimble**
Application Complete Date:	**January 4, 2008**
Issuance Date:	
Revision Date:	
Expiration Date:	

John S. Lyons, Director
Division for Air Quality

Revised 05/07/07

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Rev#	Permit type	Log #	Complete Date	Issuance Date	Summary of Action
----	**Initial Issuance**	**F720**	**12-13-1996**	**NA**	**Was not issued proposed or final. Public notification was done.**
1	**Acid Rain Permit**	**F526**	**3-03-1998**	**3-05-1999**	**Permit for Unit 1-tangential coal fired boiler**
2	**PSD permit**	**53460**	**01-14-2001**	**06-22-2001**	**Permit issued for CT unit only without expiration**
3	**PSD/TV proposed permit**	**53460**	**12-19-02**	**06-06-03**	**Consolidating all permits into one**
4	**Permit Revision one**	**APE2004 0003**	**12-24-04**	**01-04-05**	**Emission limit as enforceable as practical matter (emission reduction) and the usage of two to three dry bulk trailers for fly ash transport**
5	**Significant Revision**	**APE2004 0004**	**2-11-05**	**1-4-06**	**Construction of new utility boiler, creditable emission reduction on source wide sulfur dioxide, and addition of NOx budget to the permit.**
6	**Significant Revision**	**APE2007 0001**	**4-18-07**	**Revision 3**	**Project optimization**
7	**Renewal**	**APE2007 0006**	**1-4-08**		**Renewal and EPA Objection changes**

SECTION A - PERMIT AUTHORIZATION

Pursuant to a duly submitted application the Kentucky Division for Air Quality hereby authorizes the operation of the equipment described herein in accordance with the terms and conditions of this permit. This permit has been issued under the provisions of Kentucky Revised Statutes Chapter 224 and regulations promulgated pursuant thereto.

The permittee shall not construct, reconstruct, or modify any affected facilities without first submitting a complete application and receiving a permit for the planned activity from the permitting authority, except as provided in this permit or in 401 KAR 52:020, Title V Permits.

Issuance of this permit does not relieve the permittee from the responsibility of obtaining any other permits, licenses, or approvals required by this Cabinet or any other federal, state, or local agency.

SECTION B -EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

Emissions Unit: 01 (01) - Unit 1 Indirect Heat Exchanger

Description:
Pulverized coal-fired, dry bottom, tangentially fired, equipped with Selective Catalytic Reduction (SCR), electrostatic precipitator and wet spray scrubber with limestone/lime injection
Up to forty (40) percent petroleum coke co-firing with coal
Number two fuel oil used for startups and flame stabilization
Maximum continuous rating: 5,333 MMBtu/hour
Construction commenced: on or before September 18, 1978

Applicable Regulations:
401 KAR 51:017, Prevention of Significant Deterioration of Air Quality applicable to major construction or modification commenced after September 22, 1982;
401 KAR 51:160, NO_x requirements for large utility and industrial boilers; incorporating by reference 40 CFR 96;
401 KAR 52:060, Acid rain permits, incorporating by reference the Federal Acid Rain provisions as codified in 40 CFR Parts 72 to 78;
401 KAR 59:015, New Indirect Heat exchangers with more than 250 MMBtu per hour capacity and commenced on or after August 17, 1971;
40 CFR 60 Subpart D, Standards of Performance for fossil-fuel-fired steam generators, for an emissions unit greater than 250 MMBtu/hour and commenced after August 17, 1971;
401 KAR 63:020, Potentially hazardous matter or toxic substances.

1. Operating Limitations:

None

2. Emission Limitations:

a) Pursuant to 401 KAR 59:015, Section 4(1)(b), and 401 KAR 51:017, particulate emissions shall not exceed 0.1 lb/MMBtu based on a three-hour average.

The permittee may assure continuing compliance with the particulate emission standard by operating the affected facility and associated control equipment such that the opacity does not exceed the upper limit of the indicator range developed from continuous opacity monitoring (COM) data collected during stack tests. If five (5) percent of COM data (based on a three-hour rolling average) recorded in a calendar quarter show excursions from the indicator range, the permittee shall contact the Division within thirty (30) days after the end of the quarter to schedule a stack test to demonstrate compliance with the particulate standard while operating at the conditions which resulted in the excursions. The Division may waive this testing requirement upon a demonstration that the cause of the excursions has been corrected, or may require stack tests at any time pursuant to 401 KAR 50:045, Performance tests.

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

2. Emission Limitations continued:

b) Pursuant to 401 KAR 59:015, Section 4(2), emissions shall not exceed twenty (20) percent opacity based on a six-minute average except a maximum of twenty-seven (27) percent opacity for not more than one (1) six (6) minute period in any sixty (60) consecutive minutes. Opacity shall be demonstrated by using EPA reference Method 9. Alternatively, the permittee may use COM in determining compliance with opacity.

c) Pursuant to 401 KAR 51:017, sulfur dioxide emissions shall not exceed 0.84 lb/MMBtu based on a three-hour rolling average.

d) Pursuant to 401 KAR 59:015, Section 6(1)(c), nitrogen oxides emissions expressed as nitrogen dioxide shall not exceed 0.7 lb/MMBtu based on a three-hour rolling average.

e) Pursuant to 401 KAR 51:001, Section 1, (146), source has accepted a voluntary limit such that consecutive twelve month rolling total of nitrogen oxide emissions shall not exceed 5,556 tons per year, which through this permit is enforceable as a practical matter. This limit commenced on January 1, 2005.

f) Pursuant to 40 CFR Part 76, nitrogen oxides emissions expressed as nitrogen dioxide shall not exceed 0.45 lb/MMBtu on an annual basis. See Section J, Acid Rain Permit.

g) Pursuant to 401 KAR 51:001, Section 1, (146), source has accepted a voluntary limit such that consecutive twelve month rolling total of sulfur dioxide emissions shall not exceed 4,822 tons per year, which through this permit is enforceable as a practical matter. This limit commenced on January 1, 2006.

***Compliance Demonstration Method*:**

To provide assurance that the particulate and the visible emission limitations are being met the permittee shall comply with the **3. Testing Requirements** below. To provide assurance that sulfur dioxide and nitrogen oxides emission limits are being met the permittee shall comply with the **4. Specific Monitoring Requirements** below.

3. Testing Requirements:

a) Pursuant to 401 KAR 50:045, the permittee shall submit within six months of the issuance date of the final permit a schedule, to conduct a performance test for particulate compliance within one year of issuance of this permit.

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SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

b) Testing shall be conducted in accordance with 401 KAR 50:045, Performance Tests, and pursuant to 40 CFR 64.4(c)(1), the testing shall be conducted under conditions representative of maximum emissions potential under anticipated operating conditions at the pollutant-specific emissions unit

c) In accordance with **4.b Specific Monitoring Requirements**, the permittee shall submit a schedule within six months from the date of issuance of this permit to conduct testing within one year following the issuance of this permit to establish or re-establish the correlation between opacity and particulate emissions.

d) If no additional stack tests are performed pursuant to **4.b(ii) Specific Monitoring Requirements**, the permittee shall conduct a performance test for particulate emissions by the start of the fourth year of this permit to demonstrate compliance with the applicable standard.

e) If no EPA Reference Method 9 tests are performed pursuant to **4.a(ii) Specific Monitoring Requirements**, then the permittee shall determine the opacity of emissions from the stack by Method 9 at least once every 14 boiler operating days when operating, or more frequently if requested by the Division, to demonstrate compliance with the opacity standard. If no Method 9's are completed during the time period, the reason for not completing a test shall be documented and the permittee may use the COM system for assuring compliance with the visible emission limitation during that period.

4. Specific Monitoring Requirements:

a) Pursuant to 401 KAR 59:015, Performance Specification 1 of 40 CFR 60, Appendix B, and 401 KAR 52:020, Section 26, a continuous opacity monitoring (COM) system shall conform to requirements of these sections which include installing, calibrating, operating, and maintaining the continuous monitoring system for accurate opacity measurement. Excluding exempted time periods, if any three consecutive six-minute average opacity values exceed the opacity standard, the permittee shall, as appropriate:

(i) Accept the readout from the COM as an indicator of equipment performance and perform an inspection of the COM and/or the control equipment and make any repairs or;

(ii)Within thirty (30) minutes after the third consecutive COM indicated exceedance of the opacity standards, if emissions are visible, initiate a determination of opacity using Reference Method 9. Also within thirty (30) minutes after the third consecutive COM indicated exceedance, inspect the COM and/or the control equipment, and initiate any repairs. If a Method 9 cannot be performed, the reason for not performing the test shall be documented.

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

b) Pursuant to 401 KAR 52:020, Section 26, to meet the monitoring requirement for particulate matter, the permittee shall use a COM. Pursuant to 40 CFR 64.4(a)(1) and the CAM plan received on December 13, 2007, opacity shall be used as an indicator of particulate matter emissions. Pursuant to 40 CFR Part 64.4(c)(1), testing shall be conducted to establish the level of opacity that will be used as an indicator of particulate matter emissions. There may be short-term exceedances during the testing period required to establish the opacity indicator level. These exceedances will not be considered noncompliance periods since the testing is required to establish a permit requirement. The opacity indicator level shall be established at a level that provides reasonable assurance that particulate matter emissions are in compliance when opacity is equal to or less than the indicator level. Excluding exempted time periods:

(i) If any three (3) hour average of opacity values exceeds the opacity indicator level, the permittee shall, as appropriate, initiate an inspection of the control equipment and/or the COM system and make any necessary repairs.

(ii) If five (5) percent or greater of the COM data (three (3) hour average of opacity values) recorded in a calendar quarter show excursions above the opacity indicator level, the permittee shall perform a stack test in the following calendar quarter to demonstrate compliance with the particulate standard while operating at representative conditions. The permittee shall submit a compliance test protocol as required by Section G 5 of this permit before conducting the test. The Division may waive this testing requirement upon a demonstration that the cause(s) of the excursions have been corrected, or may require stack tests at any time pursuant to 401 KAR 50:045, Performance Tests.

c) Pursuant to the CAM plan filed on December 4, 2008, the permittee shall monitor voltage and amperage readings of the ESP transformer/rectifier sets once per shift and take corrective action whenever any of the voltage and/or amperage readings are outside normal operating ranges.

d) Pursuant to 401 KAR 59:015, Section 7 and 401 KAR 52:020, Section 26, continuous emission monitoring systems shall be installed, calibrated, maintained, and operated for measuring the opacity of emissions, sulfur dioxide emissions, nitrogen oxides emissions and either oxygen or carbon dioxide emissions. The continuous emission monitoring systems shall comply with 401 KAR 59:015, Section 7 particularly, performance specification 2 of Appendix B to 40 CFR 60 or 40 CFR 75, Appendix A. Pursuant to 40 CFR 64.3(d), the continuous emission monitoring systems shall be used to satisfy CAM requirements.

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

e) Pursuant to 401 KAR 52:020, Section 26, to meet the monitoring requirement for sulfur dioxide, the permittee shall use a continuous emission monitor (CEM) Excluding the startup and shut down periods, if any 3-hour average sulfur dioxide value exceeds the standard, the permittee shall, as appropriate, initiate an inspection of the control equipment and/or the CEM system and make any necessary repairs as soon as practicable.

f) Pursuant to 401 KAR 52:020, Section 26, to meet the monitoring requirement for nitrogen oxide, the permittee shall use a continuous emission monitor (CEM). Excluding the startup and shut down periods, if any 3-hour average nitrogen oxide value exceeds the standard, the permittee shall, as appropriate, initiate an investigation of the cause of the exceedance and/or the CEM system and make any necessary repairs or take corrective actions as soon as practicable.

g) Pursuant to 401 KAR 59:015, Section 7(3), for performance evaluations of the sulfur dioxide and nitrogen oxides continuous emission monitoring system as required under 401 KAR 59:005, Section 4(3) and calibration checks as required under 401 KAR 59:005, Section 4(4), reference methods 6c or 7e shall be used as applicable as described by 401 KAR 50:015.

h) Pursuant to 401 KAR 59:015, Section 7(3), sulfur dioxide or nitric oxide (nitrogen oxides), as applicable, shall be used for preparing calibration gas mixtures under Performance Specification 2 of Appendix B to 40 CFR 60, filed by reference in 401 KAR 50:015.

i) Pursuant to 401 KAR 59:015, Section 7(3), the span value for the continuous emission monitoring system measuring opacity of emissions shall be eighty (80), ninety (90), or one-hundred (100) percent and the span value for the continuous emission monitoring system measuring sulfur dioxide and nitrogen oxides emissions shall be in accordance with 401 KAR 59:015, Appendix C, or 40 CFR 75, Appendix A.

j) Continuous emission monitoring data shall be converted into the units of applicable standards using the conversion procedure described in 401 KAR 59:015, Section 7(5).

k) Pursuant to 401 KAR 59:015, Section 7(3), for an indirect heat exchanger that simultaneously burns fossil fuel and nonfossil fuel, the span value of all continuous monitoring systems shall be subject to the Division’s approval.

l) Pursuant to 401 KAR 52:020, Section 26, the permittee shall monitor the duration of the start up.

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

m) Permittee shall monitor and calculate emissions on a consecutive twelve month rolling total as measured by the continuous emissions monitor (CEM) required pursuant to 40 CFR 75.2(a).

n) See Section D.

5. Specific Record Keeping Requirements:

a) Pursuant to 401 KAR 59:005, Section 3 (4), the owner or operator of the indirect heat exchanger shall maintain a file of all measurements, including continuous monitoring system, monitoring device, and performance testing measurements; all continuous monitoring system performance evaluations; all continuous monitoring system or monitoring device calibration checks; adjustments and maintenance performed on these systems and devices; and all other information required by 401 KAR 59:005 recorded in a permanent form suitable for inspection.

b) Pursuant to 401 KAR 59:005, Section 3(2), the owner or operator of this unit shall maintain the records of the occurrence and duration of any startup, shutdown, or malfunction in the operation of the affected facility, any malfunction of the air pollution control equipment; or any period during which a continuous monitoring system or monitoring device is inoperative.

c) The permittee shall maintain records of the COM data on a three-hour rolling average basis, the number of excursions above the indicator range, time and date of excursions, opacity value of the excursions, and percentage of the COM data showing excursions from the indicator level in each calendar quarter.

d) Records of primary/secondary voltage and current and results of compliance tests shall be maintained with long-term operational records for a period of five (5) years.

e) The permittee shall keep visible observation records and Method 9 observations in a designated logbook and/or an electronic format. Records shall be maintained for five (5) years.

f) Pursuant to 401 KAR 52:020, Section 26, the permittee shall record the duration of start up.

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

6. Specific Reporting Requirements:

a) Pursuant to 401 KAR 59:005, Section 3 (3), minimum data requirements which follow shall be maintained and furnished in the format specified by the Division. Owners or operators of facilities required to install continuous monitoring systems shall submit for every calendar quarter a written report of excess emissions (as defined in applicable sections) to the Division. The averaging period used for data reporting should correspond to the averaging period specified in the emission test method used to determine compliance with an emission standard for the pollutant/source category in question. All quarterly reports shall be postmarked by the thirtieth (30th) day following the end of each calendar quarter and shall include the following information:

(i) The magnitude of the excess emission computed in accordance with 401 KAR 59:005, Section 4(8), any conversion factors used, and the date and time of commencement and completion of each time period of excess emissions.

(ii) All hourly averages shall be reported for sulfur dioxide and nitrogen oxides monitors. The hourly averages shall be made available in the format specified by the Division.

(iii) Specific identification of each period of excess emissions that occurs during startups, shutdowns, and malfunctions of the affected facility. The nature and cause of any malfunction (if known), the corrective action taken or preventive measures adopted.

(iv) The date and time identifying each period during which continuous monitoring system was inoperative except for zero and span checks and the nature of the system repairs or adjustments.

(v) When no excess emissions have occurred or the continuous monitoring system(s) have not been inoperative, repaired, or adjusted, such information shall be stated in the report.

b) Pursuant to 401 KAR 59:015, Section 7(7), for the purposes of reports required under 401 KAR 59:005, Section 3(3), periods of excess emissions that shall be reported are defined as follows:

i) Excess emissions are defined as any six minute period during which the average opacity of emissions exceeds twenty percent opacity, except that one (1) six (6) minute average per hour of up to twenty-seven (27) percent opacity need not be reported.

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

ii) Excess emissions of sulfur dioxide are defined as any three (3) hour period during which the average emissions (arithmetic average of three contiguous one hour periods) exceed the applicable sulfur dioxide emissions standard.

iii) Pursuant to 401 KAR 50:012, General application, excess emissions for the emissions unit using a continuous monitoring system for measuring nitrogen oxides are defined as any thirty (30) day period during which the average emissions (arithmetic average of thirty contiguous calendar days) exceed the applicable nitrogen oxides emissions standard.

c) The permittee shall report the number of excursions (excluding startup, shutdown, malfunction data) above the opacity indicator level, date and time of excursions, opacity value of the excursions, and percentage of the COM data showing excursions above the opacity indicator level in each calendar quarter.

d) See Section D

e) Pursuant to 401 KAR 52:020, Section 26, for exceedances that occur as a result of start-up, the permittee shall report:
(i) The type of start-up (cold, warm, or hot);
(ii) Whether or not the duration of the start-up exceeded the manufacturer's recommendation or typical, historical durations, and if so, an explanation of why the start-up exceeded recommended or typical durations.

f) Pursuant to 401 KAR 52:020 and 401 KAR 63:020, the permittee shall take a sample of fuel as received upon delivery for a one year period upon issuance of this permit. The samples taken shall be uniformly mixed to form a composite sample analyzed to determine antimony, arsenic, beryllium, cadmium, chromium, lead, manganese, nickel, selenium and vanadium content on a quarterly basis and report to the Regional Office. After the initial one year period, sampling shall be reduced to an annual grab sample to be analyzed for the same substances and reported to the Regional Office. Fuel vendor certified data may also be used.

7. Specific Control Equipment Operating Conditions:

a) Pursuant to 401 KAR 50:055, the electrostatic precipitator (ESP), SO2 scrubber (FGD), and selective catalytic reduction (SCR) shall be operated to maintain compliance with permitted emission limitations, in accordance with manufacturer's specifications or standard operating practices.

b) Pursuant to 401 KAR 59:005, records regarding the maintenance (e.g., routine scheduled service, replacement of parts, etc.) of the control equipment shall be maintained.

c) See Section E for further requirements.

SECTION B -EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Emissions Units: 02, 03, & 04 - Auxiliary boilers A, B, and C

Description:
#2 Fuel Oil-fired Units
Maximum continuous rating: 11.76 MMBtu/hour, each
Constructed commenced on or before: December 28, 1987

Applicable Regulations:
401 KAR 59:015, New indirect heat exchangers, applicable to an emissions unit less than 250 MMBtu/hour and commenced on or after April 9, 1972.

1. Operating Limitations:

a) Total annual #2 fuel oil usage rate for all auxiliary boilers A, B, and C (emission point 02) shall not exceed 682,500 gallons per year and sulfur content shall not exceed 0.8 percent, to demonstrate non-applicability of Prevention of Significant Deterioration of Air Quality.

b) The emission units 02, 03 and 04 will be permanently removed from service when emission unit 32 (New Auxiliary Boiler) commences operation. Upon commencement of operation of emission unit 32, emission units 2, 3, and 4 (Auxiliary boilers A, B, and C) will no longer be authorized by this permit.

2. Emission Limitations:

a) Pursuant to 401 KAR 59:015, Section 4(1)(b), particulate emissions shall not exceed 0.1 lb/MMBtu based on a three-hour average. Compliance with the allowable particulate standard may be demonstrated by calculating particulate emissions using fuel heating value, and emission factor information (Particulate formula: (0.002 lbs/gallon) / heating value in MMBtu/gallon).

b) Pursuant to 401 KAR 59:015, Section 4(2), emissions shall not exceed twenty (20) percent opacity based on a six-minute average except a maximum of forty (40) percent opacity for not more than six (6) consecutive minutes in any sixty (60) consecutive minutes during cleaning the firebox or blowing soot is allowed.

c) Pursuant to 401 KAR 59:015, Section 5(1)(b), the sulfur dioxide emission rate shall not exceed 0.8 lb/MMBtu based on a three-hour average. Compliance with the allowable sulfur dioxide standard shall be demonstrated by calculating sulfur dioxide emissions using fuel heating value, fuel supplier certification with sulfur content, and emission factor information (AP-42 factors below). Sulfur dioxide formula: (0.142 lb/gallon x Percent Sulfur in fuel) / heating value in MMBtu/gallon.

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

3. Testing Requirements:

Pursuant to 401 KAR 52:020, Section 26, the permittee shall perform a qualitative visible observation of the opacity emissions from the stack on a weekly basis and maintain a log of the observations. If visible emissions from the stack are seen, then compliance with the opacity standard shall be demonstrated by reading the opacity by EPA Reference Method 9.

4. Specific Monitoring Requirements:

a) Pursuant to 401 KAR 52:020, Section 26, to demonstrate continuing compliance with the fuel oil sulfur content limitation, monitoring of operations shall consist of, on an as-received basis, fuel supplier certification of the sulfur content of the fuel oil to be combusted. The fuel supplier certification shall include the name of the oil supplier, sulfur content, and a statement that the oil complies with the specifications under the definition for distillate oil in 401 KAR 60:005.

b) Pursuant to 401 KAR 52:020, Section 26, the fuel oil sulfur content and heating value shall be determined for the #2 fuel oil, as received, by fuel supplier certification.

c) Pursuant to 401 KAR 52:020, Section 26, the permittee shall perform a qualitative visual observation of the opacity emission from the stack once during every 100 hours of operation and maintain a log of the observations. If visible emissions from the stack are seen, then the opacity shall be determined by EPA Reference Method 9 and if the opacity reading is greater than 20% then the permittee must initiate an inspection of the equipment for any repairs. Hours of operation shall include any partial hour in which an auxiliary boiler has been fired to 75% of its rated steam capacity.

5. Specific Record Keeping Requirements:

a) Pursuant to 401 KAR 59:005, Section 3 (4), the owner or operator of the indirect heat exchanger shall maintain a file of all measurements, including monthly #2 fuel oil usage. The owner or operator shall maintain a file of the fuel supplier certification, certified analysis, or contract specifications; and all other information required by 401 KAR 59:005 recorded in a permanent form suitable for inspection. The file shall be retained for at least five (5) years following the date of such measurements, maintenance, reports, and records.

b) Pursuant to 401 KAR 52:020, Section 26, records of the #2 fuel oil used shall be maintained.

6. Specific Reporting Requirements:

See Section F.

7. Specific Control Equipment Operating Conditions:

NA

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Emissions Unit: 05 & 06 - Fossil Fuel Handling Operations and Plant Roadways

Description:

Equipment includes:	Maximum Operating Rate (Tons/hour)
Continuous barge unloader, one barge unloader bin, and fossil fuel stacker reclaimer	500
One active pile, one inactive pile, stackout conveyor S, one reclaim hopper	3000
Plant Roadways Construction commenced on or before: 1990	NA

Applicable Regulations:

401 KAR 63:010, Fugitive emissions, applicable to each affected facility which emits or may emit fugitive emissions and is not elsewhere subject to an opacity standard within the administrative regulations of the Division for Air Quality;
401 KAR 51:017, Prevention of Significant Deterioration of Air Quality applicable to major construction or modification commenced after September 22, 1982.

1. Operating Limitations:

a) Pursuant to 401 KAR 63:010, Section 3, reasonable precautions shall be taken to prevent particulate matter from becoming airborne. Such reasonable precautions shall include, when applicable, but not be limited to the following:

1. Pursuant to *Secretary's Final Order, DAQ-27602-042, Filed September 28, 2007,* application of water, or suitable chemicals on material stockpiles, and other surfaces which can create airborne dusts;

2. operation of hoods, fans, and fabric filters to enclose and vent the handling of dusty materials, or the use of water sprays or other measures to suppress the dust emissions during handling;

3. Pursuant to *Secretary's Final Order, DAQ-27602-042, Filed September 28, 2007,* paved roadways shall be maintained in a clean condition by application of water or suitable chemical;

4. the prompt removal of earth or other material from a paved street which earth or other material has been transported thereto by trucking or other earth moving equipment or erosion by water.

b) Pursuant to 401 KAR 63:010, Section 3, discharge of visible fugitive dust emissions beyond the property line is prohibited.

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

c) No one shall allow earth or other material being transported by truck or earth moving equipment to be deposited onto a paved street or roadway, pursuant to 401 KAR 63:010, Section 4.

2. Emission Limitations:

None

3. Testing Requirements:

None

4. Specific Monitoring Requirements:

See Section F.

5. Specific Record Keeping Requirements:

a) Pursuant to 401 KAR 52:020, Section 26, records of the fossil fuels received and processed shall be maintained for emissions inventory purposes.

b) Pursuant to 401 KAR 52:020, Section 26, annual records estimating the tonnage hauled for plant roadways shall be maintained for emissions inventory purposes.

6. Specific Reporting Requirements:

See Section F.

7. Specific Control Equipment Operating Conditions:

a) Pursuant to 401 KAR 52:055, the surfactants, enclosures, and a rotoclone for the fossil fuel receiving operations and the dust water suppressant system for the stockpile operations shall be used to maintain compliance with applicable requirements, in accordance with manufacturer's specifications and/or standard operating practices.

b) Pursuant to *Secretary's Final Order, DAQ-27602-042, Filed September 28, 2007,* plant roadways shall be paved in asphalt and repaired or repaved and controlled with water or suitable chemical as necessary to comply with 401 KAR 63:010.

c) Pursuant to 401 KAR 52:020, Section 26, records regarding the maintenance and use of the surfactants, enclosures, and a rotoclone for the fossil fuel receiving operations and the dust water suppressant system for the stockpile operations shall be maintained.

d) See Section E for further requirements.

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Emissions Unit: 07, 08, & 09 **Fossil Fuel Handling Operations (Please refer to Units 37 and 39 for additional future fossil fuel handling operation information)**

Description:

Continuous Barge Unloader –
One Barge Unloader Bin

Conveyor System -

Conveyor Belt A:	From Continuous Barge Unloader to Conveyor B
Conveyor Belt B:	From Conveyor A to Transfer House/Conveyor C
Conveyor Belt C:	From Transfer House to Coal Sample House Bin
Conveyor Belt D:	From Coal Sample House Bin to Conveyor E1 or S
Conveyor Belt E1:	From Conveyor D to Active Storage and Crusher House
Conveyor Belts F1 & F2:	From Crusher House to Conveyors G1 & G2
Conveyor Belts G1 & G2:	From Conveyors F1 & F2 to Unit 1 & 2 Coal Silos
Conveyor Belt S:	From Conveyor D to One Inactive Fossil Fuel Pile
Reclaim Hopper & Conveyor Belt R1:	From One Inactive Fossil Fuel Pile to Crusher House

Crusher House -
Two crushers, fossil fuel crusher bin, and fuel blender: Crusher House Activities

Operating Rate–

Continuous Barge Unloader	Transfer Rates
One Barge Unloader	5,500 tons/hour

Conveyor System -

Conveyor Belt A:	5,500 tons/hour
Conveyor Belt B:	5,500 tons/hour
Conveyor Belt C:	5,500 tons/hour
Conveyor Belt D:	3,000 tons/hour
Conveyor Belt E1:	2,640 tons/hour
Conveyor Belts F1 & F2:	1,320 tons/hour
Conveyors G1 & G2	1,320 tons/hour
Conveyor Belt S:	1,650 tons/hour
Reclaim Hopper & Conveyor Belt R1:	1,320 tons/hour

Crusher House -
Two crushers, fossil fuel crusher bin, and fuel blender: 3,600 tons/hour

Power House -
Six –Boiler Unit 1 fossil fuel silos: 800 tons/hour

Construction commenced on or before: 1990

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Applicable Regulations:
401 KAR 60:005, incorporating by reference 40 CFR 60 Subpart Y, Standards of Performance for Coal Preparation Plants for units commenced after October 24, 1974
401 KAR 51:017, Prevention of Significant Deterioration of Air Quality applicable to major construction or modification commenced after September 22, 1982.

1. Operating Limitations:
None

2. Emission Limitations:
Pursuant to 401 KAR 60:005 incorporating by reference 40 CFR 60.252, the owner or operator subject to the provisions of this regulation shall not cause to be discharged into the atmosphere from any coal processing and conveying equipment, coal storage system, or transfer and loading system processing coal, gases which exhibit 20 percent opacity or greater.

3. Testing Requirements:
Pursuant to 401 KAR 60:005 incorporating by reference, 40 CFR 60.254, EPA Reference Method 9 and the procedures in 40 CFR 60.11 shall be used to determine opacity at least annually, or more frequently if requested by the Division.

4. Specific Monitoring Requirements:
Pursuant to 401 KAR 52:020, Section 26, the permittee shall perform a qualitative visual observation of the opacity of emissions from each stack on a weekly basis and maintain a log of the observations. If visible emissions from any stack are seen, the permittee shall determine the opacity of emissions by Reference Method 9 and perform an inspection of the control equipment making any necessary repairs.

5. Specific Record Keeping Requirements:
Pursuant to 401 KAR 52:020, Section 26, records of the fossil fuels processed shall be maintained for emissions inventory purposes.

6. Specific Reporting Requirements:
See Section F.

7. Specific Control Equipment Operating Conditions:

a) Pursuant to 401 KAR 50:055, the enclosures, surfactants, and rotoclone(s) for crushing and associated conveying operations, the partial enclosures for conveyor system with belts A, B, C, D, G1, G2, 1, 2, and fuel blender, and baghouse for the six fossil fuel silos shall be used and operated to maintain compliance with permitted emission limitations, in accordance with manufacturer's specifications or standard operating practices.

b) Pursuant to 401 KAR 52:020, Section 26, records regarding the maintenance and use/operation of the control equipment listed in 7(a) shall be maintained.

c) See Section E for further requirements.

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Emissions Unit: 10 (10 and 11) - Lime/Limestone Handling and Processing

Description:
Equipment includes: Receiving Operations: clamshell unloader, clamshell barge unloader bin;
Stockpile Stackout Operations (inactive outdoor storage)
Maximum Operating Rate (Receiving): 1650 Tons/hour
Maximum Operating Rate (Stockpile/Stackout): 1500 Tons/hr
Construction commenced on or before: 1990

Applicable Regulations:
401 KAR 63:010, Fugitive emissions, applicable to each affected facility which emits or may emit fugitive emissions and is not elsewhere subject to an opacity standard within the administrative regulations of the Division for Air Quality;
401 KAR 51:017, Prevention of Significant Deterioration of Air Quality applicable to major construction or modification commenced after September 22, 1982.

1. Operating Limitations:

a) Pursuant to 401 KAR 63:010, Section 3, reasonable precautions shall be taken to prevent particulate matter from becoming airborne. Such reasonable precautions shall include, when applicable, but not be limited to the following:

1. application and maintenance of asphalt, application of water, or suitable chemicals on roads, material stockpiles, and other surfaces which can create airborne dusts;

2. operation of hoods, fans, and fabric filters to enclose and vent the handling of dusty materials, or the use of water sprays or other measures to suppress the dust emissions during handling.

b) Pursuant to 401 KAR 63:010, Section 3, discharge of visible fugitive dust emissions beyond the property line is prohibited.

2. Emission Limitations:
None

3. Testing Requirements:
None

4. Specific Monitoring Requirements:
See Section F.

5. Specific Record Keeping Requirements:
Pursuant to 401 KAR 52:020, Section 26, records of the lime and/or limestone received and processed shall be maintained for emissions inventory purposes.

6. Specific Reporting Requirements:
See Section F.

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

7. Specific Control Equipment Operating Conditions:

a) Pursuant to 401 KAR 50:055, the wet spray low water surfactant and enclosures shall be used as maintain compliance with applicable requirements, in accordance with manufacturer's specifications or standard operating practices.

b) Pursuant to 401 KAR 52:020, Section 26, records regarding the maintenance and use of the wet spray low water surfactant and enclosures shall be maintained.

c) See Section E for further requirements.

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Emissions Unit: 13 - Lime/Limestone Handling and Processing

Description:
Equipment Includes: crushing operation
and milling operations (two ball mills)
Operating Rate: 260 Tons/hour, each
Construction commenced on or before: 1990

Applicable Regulations:
401 KAR 60.670, New nonmetallic mineral processing plants, incorporating by reference 40 CFR 60, Subpart OOO, applies to each of the emissions units listed above, commenced after August 31, 1983;
401 KAR 51:017, Prevention of Significant Deterioration of Air Quality applicable to major construction or modification commenced after September 22, 1982.

1. Operating Limitations:
None

2. Emission Standards:

a) Pursuant to 401 KAR 60.670, incorporating by reference 40 CFR 60.672(e), no owner or operator shall cause to be discharged into the atmosphere from any building enclosing any transfer point on a conveyor belt or any other emissions unit any visible fugitive emissions.

Note that the crusher building is located underground with no direct vent to the atmosphere; therefore as long as this is the case it is assumed to be in compliance.

3. Testing Requirements:
In determining compliance with 401 KAR 60.670, incorporating by reference 40 CFR 60.672(e) for fugitive emissions from buildings, the owner(s) or operator(s) shall determine fugitive emissions while all emissions units are operating in accordance with EPA Reference Method 22, annually.

4. Specific Monitoring Requirements:
Pursuant to 401 KAR 50:050, the permittee shall inspect the control equipment weekly and make repairs as necessary to assure compliance.

5. Specific Record Keeping Requirements:
Pursuant to 401 KAR 52:020, Section 26, records of the lime and/or limestone processed shall be maintained for emissions inventory purposes.

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

6. Specific Reporting Requirements:

a) Pursuant to 401 KAR 60.670, incorporating by reference 40 CFR 60.676, the owner(s) or operator(s) of any emissions unit shall submit written reports of the results of all performance tests conducted to demonstrate compliance with the standards of 40 CFR 60.672 and 401 KAR 59:310, including reports of observations using Method 22 to demonstrate compliance.

b) See Section F.

7. Specific Control Equipment Operating Conditions:

a) Pursuant to 401 KAR 50:055, the enclosure shall be used to maintain compliance with permitted emission limitations, in accordance with manufacturer's specifications or standard operating practices.

b) Pursuant to 401 KAR 52:020, Section 26, records regarding the maintenance of the enclosure shall be maintained.

c) See Section E for further requirements.

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Emissions Unit: 14 - Lime/Limestone Handling and Processing

Description:
Equipment Includes: conveyors and transfer points (conveyor system, belts A, B, C, transfer bin, and reclaim hopper)
Maximum Operating Rate: 1500 Tons/hour, each
Construction commenced on or before: 1990

Applicable Regulations:
401 KAR 60:670, incorporating by reference 40 CFR 60 Subpart OOO, Standards of Performance for Nonmetallic Mineral Processing Plants, as modified by Section 3 of 401 KAR 60:670, applies to each of the emissions units listed above, commenced after August 31, 1983;
401 KAR 51:017, Prevention of Significant Deterioration of Air Quality applicable to major construction or modification commenced after September 22, 1982.

1. Operating Limitations:
None

2. Emission Standards:

a) Pursuant to 401 KAR 60.670, incorporating by reference 40 CFR 60.672 (b), the owner(s) or operator(s) shall not cause to be discharged into the atmosphere from any transfer point on belt conveyors or from any other emissions unit any fugitive emissions which exhibit greater than ten (10) percent opacity.

b) Pursuant to 401 KAR 60.670, incorporating by reference 40 CFR 60.672(e), no owner or operator shall cause to be discharged into the atmosphere from any building/enclosure enclosing any transfer point on a conveyor belt or any other emissions unit any visible fugitive emissions.

3. Testing Requirements:

a) EPA Reference Method 9 and the procedures in 40 CFR 60.11 and 40 CFR 60.675 shall be used for determining opacity, annually.

b) In determining compliance with 401 KAR 401 KAR 60.670, incorporating by reference 40 CFR 60.672(e) for fugitive emissions from buildings/enclosures, the owner(s) or operator(s) shall determine fugitive emissions while all emissions units are operating in accordance with EPA Reference Method 22, annually.

4. Specific Monitoring Requirements:
Pursuant to 401 KAR 52:020, Section 26, the permittee shall inspect the control equipment weekly and make repairs as necessary to assure compliance.

5. Specific Record Keeping Requirements:
Pursuant to 401 KAR 52:020, Section 26, records of the lime and/or limestone processed shall be maintained for emissions inventory purposes.

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

6. Specific Reporting Requirements:

a) Pursuant to 401 KAR 60.670, incorporating by reference 40 CFR 60.676, the owner(s) or operator(s) of any emissions unit shall submit written reports of the results of all performance tests conducted to demonstrate compliance with the standards of 40 CFR 60.672, including reports of opacity observations made using Method 9 to demonstrate compliance, and reports of observations using Method 22 to demonstrate compliance.

b) See Section F.

7. Specific Control Equipment Operating Conditions:

a) Pursuant to 401 KAR 50:055, the partial enclosures shall be used to maintain compliance with permitted emission limitations, in accordance with manufacturer's specifications or standard operating practices.

b) Pursuant to 401 KAR 52:020, Section 26, records regarding the maintenance of the partial enclosures shall be maintained.

c) See Section E for further requirements.

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Emissions Unit: 18 - Emergency Diesel Generator

Description:
Maximum Output: 150 kW
Rated capacity: 16.1 gallons/hour diesel fuel
Constructed on or before date: 1995

Applicable Regulations:
None

1. Operating Limitations:
None

2. Emission Limitations:
None

3. Testing Requirements:
None

4. Specific Monitoring Requirements:
Pursuant to 401 KAR 52:020, Section 26, the permittee shall monitor fuel usage rate on a monthly basis

5. Specific Record Keeping Requirements:
Pursuant to 401 KAR 52:020, Section 26, the permittee shall record fuel usage rate on a monthly basis

6. Specific Reporting Requirements:
See Section F.

7. Specific Control Equipment Operating Conditions:
NA

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Emissions Unit: 20-- Existing Natural Draft Cooling Tower (with eight chemical injection pumps and three circulating water pumps)

Description:

Control Equipment:	0.008% Drift Eliminators
Circulating Water Rate:	249,000 Gallons per Minute
Construction Commenced Date:	September 1990; modified 2009

Applicable Regulations:

401 KAR 63:010, Fugitive emissions, applicable to each affected facility which emits or may emit fugitive emissions and is not elsewhere subject to an opacity standard within the administrative regulations of the Division for Air Quality;

401 KAR 51:017, Prevention of Significant Deterioration of Air Quality applicable to major construction or modification commenced after September 22, 1982.

1. Operating Limitations:

a) Pursuant to 401 KAR 63:010, Section 3, reasonable precautions shall be taken to prevent particulate matter from becoming airborne.

b) Pursuant to 401 KAR 63:010, Section 3, discharge of visible fugitive dust emissions beyond the property line is prohibited.

c) Emission Unit 20 will continue to operate (drift eliminators will remain at 0.008%) and service Emission Unit 1 until the completed construction of Emission Unit 31. At that time, Emission Unit 20's drift eliminators will be modified to achieve 0.0005% and to provide service to Emission Unit 31

2. Emission Limitations:

a) Pursuant to 401 KAR 51:017, the cooling tower shall utilize 0.008% Drift Eliminators when servicing Emission Unit 1 and 0.0005% Drift Eliminators when servicing Emission Unit 31.

b) Pursuant to 401 KAR 63:010, Section 3, reasonable precautions shall be taken to prevent particulate matter from becoming airborne.

3. Testing Requirements:

None

4. Specific Monitoring Requirements:

Pursuant to 401 KAR 50:050, the permittee shall monitor of total dissolved solids content of the circulating water on a monthly basis.

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

5. Specific Record Keeping Requirements:

a) Pursuant to 401 KAR 52:020, Section 26, the owner or operator shall maintain records of the manufacturer's design of the Drift Eliminators.

b) Pursuant to 401 KAR 52:020, Section 26, the owner or operator shall maintain records of water circulation rate and monthly records of the circulating water total dissolved solids content.

6. Specific Reporting Requirements:

See Section F for further requirements.

7. Specific Control Equipment Operating Conditions:

a) Pursuant to 401 KAR 50:055, Section 5, the drift eliminators shall be maintained and operated to ensure the emission units are in compliance with applicable requirements of 401 KAR 63:010 and in accordance with manufacturer's specifications or standard operating practices.

b) See Section E for further requirements.

SECTION B -EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Emissions Units: 25 – 30 - 6 Combustion Turbines (TC5 - TC10)

Description:
1763 MMBtu/hr maximum rated heat input capacity (@ -10 degrees F), each, 160 MW nominal rated capacity output each. General Electric 7FA natural gas-fired simple cycle combustion turbines equipped with dry low NO_x burners.
Units 25 & 26 (TC 5 & TC6) commenced operation in May of 2002
Units 27 & 28 (TC 7 & TC8) commenced operation in June of 2004
Units 29 & 30 (TC 9 & TC10) commenced operation in July of 2004

Applicable Regulations:
401 KAR 60:005, incorporating by reference 40 CFR 60, Subpart GG, Standards of Performance for Stationary Gas Turbines, for emissions unit with a heat input at peak load equal to or greater than 10 MMBtu/hour for which construction commenced after October 3, 1977, and 40 CFR 60, Subpart A, General Provisions.
401 KAR 51:017, Prevention of significant deterioration of air quality
401 KAR 63:020, Potentially hazardous matter or toxic substances

1. Operating Limitations:

a) The Permittee shall not operate any combustion turbine below load levels at which performance testing has proven compliance with emission limitations, except during periods of startup and shutdown. Startup and shutdown periods shall be limited to no more than two hours for each startup/shutdown event.

b) The Permittee shall use only natural gas in the turbines.

2. Emission Limitations:

a) Pursuant to 401 KAR 51:017, nitrogen oxides emission levels in the exhaust gas shall not exceed a hourly average of 12 ppm by volume at 15 percent oxygen on a dry basis, and an annual (12 month rolling) average of 9 ppm by volume at 15 percent oxygen on a dry basis, except during periods of startup, shutdown, or malfunction. Continuous compliance with this limit shall be demonstrated by a continuous emission monitor (CEM). Compliance with this limit constitutes compliance with the nitrogen oxide limit contained in 40 CFR 60 Subpart GG.

b) Pursuant to 401 KAR 51:017, the fuel sulfur content due to the firing of natural gas shall not exceed 2.0 grains/100 SCF. Compliance with this limit shall be demonstrated by fuel sampling or vendor guarantees.

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

c) Pursuant to 401 KAR 51:017, except during periods of startup, shutdown, or malfunction, the carbon monoxide emission level in the exhaust gas shall not exceed 9 ppm by volume at 15 % oxygen, on a dry basis, during any 3-hour average period. Continuous compliance with this limit shall be demonstrated by a continuous emission monitor (CEM).

d) Pursuant to 401 KAR 51:017, particulate emissions shall not exceed 19 pounds per hour.

e) Pursuant to 401 KAR 63:020, the permittee shall not allow total formaldehyde emissions in the exhaust gas to exceed 10 tons during any consecutive 12- month period.

f) See Section D.

3. Testing Requirements:

Pursuant to 40 CFR 60.335(b), in conducting performance tests required by 40 CFR 60.8, the owner or operator shall use as test methods and procedures the test methods in Appendix A of Part 60 or other methods or procedures as specified in 40 CFR 60.335, except as provided for in 40 CFR 60.8(b).

4. Specific Monitoring Requirements:

a) Pursuant to 401 KAR 52:020, Section 26, and 40 CFR 75.2, the permittee shall install, calibrate, maintain, and operate the nitrogen oxides Continuous Emissions Monitor (CEM). The nitrogen oxides CEM shall be used as the indicator of continuous compliance with the nitrogen oxides emission standard. Excluding the startup and shut down periods, if any (1) one-hour average exceeds the nitrogen oxides emission limitation, the permittee shall, as appropriate, initiate an investigation of the cause of the exceedance and complete necessary control device/process/CEM repairs or take corrective action as soon as practicable.

b) Pursuant to 401 KAR 52:020, Section 26, the permittee shall monitor the quantity of natural gas, in millions of cubic feet, fired in each combustion turbine on a daily basis.

c) Pursuant to 40 CFR 60.334(b), the owner or operator of any stationary turbine shall monitor sulfur content of the fuel being fired in the turbine. The frequency of determination of these values shall be as specified in the following approved Custom fuel monitoring schedule. The permittee will sample the natural gas for sulfur content every six months or use vendor guarantees that the gas contains 2.0 grains/100 SCF of sulfur or less as proof of natural gas quality.

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

d) Pursuant to 401 KAR 52:020, Section 26, to meet the monitoring requirement for carbon monoxide the permittee shall use a continuous emission monitor (CEM). Excluding the startup and shut down periods, if any (3) three-hour average carbon monoxide value exceeds the standard, the permittee shall, as appropriate, initiate an investigation of the cause of the exceedance and complete necessary process or CEM repairs or take corrective action as soon as practicable.

e) The permittee shall install, calibrate, operate, test, and monitor all continuous monitoring systems and monitoring devices in accordance with 40 CFR 60.13 or 40 CFR 75.10

f) Pursuant to 401 KAR 52:020, Section 26, the Permittee shall monitor the hours of operation of each combustion turbine on a daily basis.

g) Pursuant to 401 KAR 52:020, Section 26, the Permittee shall monitor the power output, in MW, of each combustion turbine on a daily basis.

5. Specific Record Keeping Requirements:

a) Pursuant to 40 CFR 60.7 (f), the owner or operator of the gas turbines shall maintain a file of all measurements, including continuous monitoring system, monitoring device, and performance testing measurements; all continuous monitoring system performance evaluations; all continuous monitoring system or monitoring device calibration checks; adjustments and maintenance performed on these systems and devices; and all other information required by 40 CFR 60, Subpart A recorded in a permanent form suitable for inspection.

b) Records, including those documenting the results of each compliance test and all other records and reports required by this permit, shall be maintained for five (5) years pursuant to 401 KAR 52:020.

c) Pursuant to 401 KAR 52:020, Section 26, the permittee shall maintain a log of all sulfur content measurements as required in the approved custom fuel sulfur-monitoring plan (Condition 4(c) above).

d) Pursuant to 401 KAR 52:020, Section 26, the permittee shall maintain a daily log of the natural gas, in millions of cubic feet, fired in each combustion turbine, for any consecutive twelve (12) month period.

e) Pursuant to 401 KAR 52:020, Section 26, the permittee shall maintain a daily log of all hours of operation for each combustion turbine, for any consecutive twelve (12) month period.

SECTION B -EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

f) Pursuant to 401 KAR 52:020, Section 26, the permittee shall maintain a daily log of all power output, in MW, for each combustion turbine, for any consecutive twelve (12) month period.

6. Specific Reporting Requirements:

a) Pursuant to 40 CFR 60.7 (c), minimum data requirements which follow shall be maintained and furnished in the format specified by the Division. Owners or operators of facilities required to install continuous monitoring systems shall submit for every calendar quarter a written report of excess emissions (as defined in applicable sections) to the Division. All quarterly reports shall be postmarked by the thirtieth (30th) day following the end of each calendar quarter and shall include the following information:

1) The magnitude of the excess emissions computed in accordance with the 40 CFR 60.13 (h), any conversion factors used, and the date and time of commencement and completion of each time period of excess emissions.

2) Specific identification of each period of excess emissions that occurs during startups, shutdowns, and malfunctions of the emissions unit. The nature and cause of any malfunction (if known), the corrective action taken or preventive measures adopted.

3) The date and time identifying each period during which continuous monitoring system was inoperative except for zero and span checks and the nature of the system repairs or adjustments.

4) When no excess emissions have occurred or the continuous monitoring system(s) have not been inoperative, repaired, or adjusted, such information shall be stated in the report.

b) Pursuant to 401 KAR 52:020, Section 26, monitoring requirement with CEM for nitrogen oxides, excess emissions are defined as any (1) one-hour period during which the average emissions (arithmetic average) exceed the applicable nitrogen oxides emission standard. These periods of excess emissions shall be reported quarterly. The nitrogen oxide CEM reports will be used in lieu of the water to fuel ratio requirements of 40 CFR 60.334(c).

c) Pursuant to 40 CFR 60.334(c), excess emissions of sulfur dioxide are defined as any daily period (or as otherwise required in an approved custom fuel sulfur monitoring plan) during which the sulfur content of the fuel being fired in the gas turbine(s) exceeds the limitations set forth in Subsection 2, Emission Limitations. These periods of excess emissions shall be reported quarterly.

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

d) Pursuant to 401 KAR 52:020, Section 26, monitoring requirement with CEM for carbon monoxide, excess emissions are defined as any (3) three-hour period during which the average emissions (arithmetic average) exceed the applicable carbon monoxide emission standard. These periods of excess emissions shall be reported quarterly.

7. Specific Control Equipment Operating Conditions:

a) Pursuant to 401 KAR 50:055, the Dry Low-NO_x Burners shall be operated to maintain compliance with permitted emission limitations, in accordance with manufacturer's specifications or standard operating practices.

b) See Section E for further requirements.

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Emissions Unit: 31 - Unit 2 - Supercritical Pulverized Coal Fired Steam Electric Generating Unit Nominal rating 750 MW

Description:

Supercritical Pulverized Coal (SPC) Boiler, equipped with Selective Catalytic Reduction (SCR); Dry Electrostatic Precipitator (DESP); Powdered Activated Carbon (PAC) Injection; Hydrated Lime Injection; Pulse Jet Fabric Filter (PJFF); Wet Flue Gas Desulfurization (WFGD); and Wet Electrostatic Precipitator (WESP).
ASTM Grade No. 2-D S15 (Ultra Low Sulfur Diesel-ULSD) fuel oil used for startup and stabilization.
Design capacity rating: 6,942 MMBtu/hour
Fuels include (i) Eastern bituminous coal, and (ii) a blend of Eastern bituminous coal and Western subbituminous coal.
Construction Commence Date: July 6, 2006

Applicable Regulations:

401 KAR 51:017, Prevention of Significant Deterioration of Air Quality applicable to major construction or modification commenced after September 22, 1982;
401 KAR 51:160, NO_x requirements for large utility and industrial boilers; incorporating by reference 40 CFR 96;
401 KAR 52:060, Acid rain permits, incorporating by reference the Federal Acid Rain provisions as codified in 40 CFR Parts 72 to 78;
40 CFR 60, Appendix F, Quality Assurance Procedures
401 KAR 60:005, incorporating by reference 40 CFR 60, Subpart Da, Standards of Performance for Electric Utility Steam Generating Units applicable to an emission unit with a capacity of more than 250 MMBtu per hour and commenced construction on or after September 19, 1978;
401 KAR 63:020, Potentially Hazardous Matter or Toxic Substances
40 CFR 64, Compliance Assurance Monitoring
40 CFR 75, Continuous Emission Monitoring
Compliance with 40 CFR 75, Continuous Emissions Monitoring, shall constitute compliance with the monitoring and quality assurance requirements of 40 CFR 60.49 Da and 40 CFR 60, Appendix F.

1. Operating Limitations:

The owner or operator shall utilize control devices selected as BACT.

- BACT for PM/PM_{10} is PJFF.
- BACT for CO is good combustion controls.
- BACT for H_2SO_4 mist is WESP.
- BACT for fluorides (as HF) is WFGD.
- BACT does not apply to NO_x and SO_2, however BACT type controls with similar emission levels will be installed with a SCR for NO_x emissions and WFGD for SO_2.
- Only ASTM Grade No. 2-D S15 (Ultra Low Sulfur Diesel-ULSD) or equivalent with a sulfur content not to exceed 15 ppm shall be used for startup and stabilization.

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

2. Emission Limitations:

a) Pursuant to 401 KAR 51:017, particulate and PM_{10} emissions shall not exceed 0.018 lb/MMBtu (filterable and condensable) of heat input based on the average of three one-hour tests.

b) Pursuant to 401 KAR 60:005 and 40 CFR 60.42Da(c), filterable particulate emissions shall not exceed 0.015 lb/MMBtu of heat input based on a three-hour rolling average. Compliance with this limit shall constitute compliance with the requirement contained in 40 CFR 60.42Da(a)(2).

c) Pursuant to 401 KAR 60:005 and 40 CFR 60.42Da(b), emissions shall not exceed twenty (20) percent opacity based on a six-minute average except that a maximum of twenty-seven (27) percent is allowed for not more than one (1) six (6) minute period per hour.

d) Pursuant to 401 KAR 51:017, Sulfur dioxide emissions shall not exceed 8.94 tons per calendar day and 3,263.1 tons per 12 consecutive months total.

e) Pursuant to 401 KAR 60:005, and 40 CFR 60.43Da(i), sulfur dioxide emissions shall not exceed 1.4 lb/MWh gross energy output, based on a thirty (30) day rolling average or 5% of the potential combustion concentration (95% reduction) based on a 30 day rolling average basis.

f) Pursuant to 401 KAR 51:017, Carbon monoxide emissions shall not exceed 0.10 lbs/MMBtu based on a thirty day rolling average or 0.5 lbs/MMBtu on a three hour rolling average. Pursuant to *Secretary's Final Order, DAQ-27602-042, Filed September 28, 2007*, for the purposes of ensuring compliance with 401 KAR 53:010, Ambient Air Quality Standards, emissions of CO shall not exceed 3471 lb/hr on an eight hour average and 3471 lb/hr one hour rolling average.

g) Pursuant to 401 KAR 51:017, Nitrogen oxides emissions shall not exceed 4.17 tons per calendar day and 1,506.72 tons per 12 consecutive months total.

h) Pursuant to 401 KAR 60:005, and 40 CFR 60.44Da(e), nitrogen oxides emissions shall not exceed 1.0 lb/MWh gross energy output, based on a 30-day rolling average. Compliance with this limitation shall constitute compliance with the 65% reduction requirement contained in 40 CFR 60.44Da(a)(2).

i) Pursuant to 401 KAR 51:017, VOC emissions shall not exceed 0.0032 lbs/MMBtu based on a three (3) hour rolling average. Compliance with this limit shall be demonstrated by compliance with Subsection 2(f) above.

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

j) Pursuant to 401 KAR 51:017, Sulfuric acid mist emissions shall not exceed 26.6 lbs/hr based on a three (3) hour rolling average.

k) Pursuant to 401 KAR 51:017, Fluorides emissions shall not exceed 1.55 lbs/hr based on a three (3) hour rolling average.

l) Pursuant to 401 KAR 52:020, Section 26, mercury emissions shall not exceed 13 x 10^{-6} lbs/MWh (Gross output) based on a consecutive twelve (12) month rolling average.

m) Pursuant to 401 KAR 51:001, the Division determined that lead will not be emitted in a significant amount to require a BACT analysis under 401 KAR 51:017, Section 8. Lead emission shall not exceed 0.55 tons per year based on a 12-month rolling average.

n) Pursuant to 401 KAR 63:020, the use of good combustion controls, PJFF, WFGD, and WESP shall be used for the control of organic toxic substances.

o) Compliance with emission limits in Subsections (a), (d), (f) and (i) shall constitute compliance with 401 KAR 63:020 with respect to toxic substances. Mercury is regulated under 401 KAR 63:020, until such time as a state or federal standard becomes applicable to these emissions. Compliance with condition 1) above ensures compliance with 401 KAR 63:020.

p) The above emission standards may not apply during periods of startup, shutdown, and malfunction as based upon state or federal NSPS standards. BACT limitations in Subsections (a), (f), (i) (j) and (k) do not apply during periods of startup events and shutdown events. However, emissions during startup events and shutdown events shall be included in determining compliance with tons per year limits specified in this permit. Pursuant to 401 KAR 51:017, the owner or operator shall utilize good work and maintenance practices and manufacturer's recommendations to minimize emissions during, and the frequency and duration of, such events. During startup events and shutdown events, averaged over the duration of startup event or shutdown event, emission of PM/PM_{10} shall not exceed 125 lbs/hr, emission of carbon monoxide shall not exceed 3471 lbs/hr, emissions of VOC shall not exceed 22 lbs/hr, emissions of SAM shall not exceed 26.6 lbs/hr and emissions of fluorides shall not exceed 1.55 lbs/hr. Every emission limitation in this **Subsection** p, is based on a thirty day (30) rolling average.

q) A "Startup event" shall be considered to be the period of the setting in operation of the PC boiler for any purpose after demonstration of initial compliance, beginning with the ignition of fuel oil in the boiler and ending when the generator has achieved and sustained 30-40% of its load rated capacity for a period of at least one hour.

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

r) A startup event shall not exceed 24 hours, except to avoid equipment damage, unsafe operation, or deviation from established original equipment manufacture (OEM) procedure. A "shutdown event" is considered as the cessation of operation of the PC boiler, beginning with the lowering of the boilers from minimum load and curtailment of the fuel supply to the boilers, and ending after fuel flow has ceased. A shutdown event shall not exceed 10 hours.

s) For a startup event lasting longer than 24 hours and a shutdown event lasting longer than 10 hours, the permittee shall record the time, date, type of event (startup and shutdown), duration of the event and shall specify the cause of the exceedance and provide measures that will be taken to prevent such exceedances. The permittee shall also provide notification in accordance with Section F.7 and 8- **monitoring, recordkeeping and reporting requirements of the permit.**

3. Testing Requirements:

a) Pursuant to 401 KAR 50:055, Section 2(1)(a) the owner or operator shall demonstrate compliance with the applicable emission standards within sixty (60) days after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial startup of the unit.

b) Pursuant to 401 KAR 50:045, Section 2 and 50:015, Section 1, the owner or operator shall determine the opacity of emissions from the stack by EPA Reference Method 9 as requested by the Division.

c) See Section D for further requirements.

4. Specific Monitoring Requirements:

a) Pursuant to 401 KAR 52:020, 401 KAR 51:017, 401 KAR 60:005, and 40 CFR 60.49Da, the owner or operator shall install, calibrate, maintain, and operate continuous monitoring systems for measuring the opacity of emissions, sulfur dioxide emissions, carbon monoxide emissions, nitrogen oxides emissions, particulate matter emissions, mercury emissions, and either oxygen or carbon dioxide diluents. Oxygen or carbon dioxide shall be monitored at each location where sulfur dioxide or nitrogen oxides emissions are monitored. The owner or operator shall ensure the continuous monitoring systems are in compliance with the requirements of 40 CFR 60.50Da . Due to the wet nature of the stack, a continuous opacity monitor (COM) shall be located after the PJFF and before the WFGD as an indicator of performance.

b) Pursuant to 401 KAR 52:020 and 40 CFR 75.2, to meet the continuous monitoring requirement for sulfur dioxide, the owner or operator shall use a continuous emission monitor (CEM). If any 30 day rolling average (excluding the startup and shut down periods) or 8.94 tons per day limit for sulfur dioxide exceeds the limits, the owner or operator shall, as appropriate, initiate an inspection of the control equipment and/or the CEM system and make any necessary repairs as soon as practicable.

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

c) Pursuant to 401 KAR 52:020, 40 CFR 60.49Da (c) and 40 CFR 75.2, to meet the continuous monitoring requirement for nitrogen oxide, the owner or operator shall use a CEM. If any 30 day rolling average (excluding the startup and shut down periods) or 4.17 tons per day limit for nitrogen oxide exceeds the limits, the owner or operator shall, as appropriate, initiate an inspection of the control equipment and/or the CEM system and make any necessary repairs as soon as practicable.

d) Pursuant to 401 KAR 52:020, Section 26, and 401 KAR 51:017, to meet the monitoring requirement for CO, the owner or operator shall use a CEM.

e) Pursuant to 401 KAR 52:020, Section 26, and 401 KAR 51:017, to meet the monitoring requirement for PM/PM_{10}, the owner or operator shall use a CEM.

f) Pursuant to 401 KAR 52:020, Section 26, and 40 CFR 60.49a(p), to meet the monitoring requirement for mercury the owner or operator shall use a CEM, mercury monitor, or equivalent EPA approved method.

g) Pursuant to 40 CFR 60.49a and 401 KAR 52:020, all the CEM systems shall be operated and data shall be recorded during all periods of operation of the emissions units including periods of startup, shutdown, malfunction or emergency conditions, except for continuous monitoring system breakdowns, repairs, calibration checks, and zero and span adjustments.

h) Pursuant to 401 KAR 52:020 when emission data are not obtained because of continuous monitoring system breakdowns, repairs, calibration checks, and zero and span adjustments, the owner or operator shall obtain emission data by using other monitoring systems as approved by the Division or other data substitution methods, including 40 CFR 75, to provide emission data for a minimum of eighteen hours in at least twenty-two out of thirty successive boiler operating days.

i) The following procedures shall be used to conduct monitoring system performance evaluations and calibration checks as required under40 CFR 60.49Da,:

1. Reference Method 6 or 7, as applicable shall be used for conducting performance evaluations of sulfur dioxide and nitrogen oxides CEM systems.

2. Sulfur dioxide or nitrogen oxides, as applicable, shall be used for preparing calibration mixtures under Performance Specification 2 of Appendix B to 40 CFR 60 incorporated by reference in 401 KAR 50:015, or under 40 CFR 75.

3. The span value for the continuous monitoring system for measuring opacity shall be between sixty (60) and eighty (80) percent and the span value for the continuous monitoring system for measuring nitrogen oxides shall be 1,000 ppm, or span values as specified in 40 CFR 75, Appendix A.

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

4. The span value for the continuous monitoring system for measuring sulfur dioxide at the outlet of the control device shall be 50 percent of the maximum estimated hourly potential emissions of the fuel fired, or span values as specified in 40 CFR 75, Appendix A.

j) The Permittee shall monitor and record the time, date and duration of each shutdown and startup event. The records must include calculations of PM/PM_{10} and carbon monoxide emissions based on continuous emission monitor (CEM) data during each event. Compliance with the carbon monoxide startup/shutdown BACT limit shall serve as an indicator of compliance for VOC during shutdown and startup events. Compliance with the SAM and fluoride startup/shutdown BACT emission limits shall be determined based on the CAM monitoring plan and manufacturer's recommended startup and shutdown conditions for the control equipment. Compliance with these startup/shutdown requirements does not excuse the Permittee from any other recording and reporting requirements contained in this permit, 401 KAR 50:055 or other applicable standards. Within one year after demonstration of initial compliance, the permittee shall provide the Division with a summary of all startup and shutdown events and an analysis of type (cold, warm, hot) and duration.

k) Pursuant to 401 KAR 52:020, Section 26, the permittee shall monitor and record the duration of startup.

l) CAM Requirements. The owner or operator shall use Sulfur Dioxide (SO_2), Nitrogen Oxides (NO_x), and particulate matter (PM/PM_{10}) Continuous Emissions Monitors (CEMs) as continuous compliance determination methods consistent with 40 CFR 64.4(d) for those specific parameters, and to demonstrate compliance with Best Available Control Technology (BACT) limits contained in this permit, as applicable.

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Pursuant to 40 CFR 64.6, monitoring for H_2SO_4 and Fluoride is shown in the table below:

TABLE 1: CAM MONITORING APPROACH

Applicable CAM Requirement	H_2SO_4 Mist	Fluoride
General Requirements	26.6 lb/hr 3 hour rolling average	1.55 lb/hr 3 hour rolling average
Monitoring Methods and Location	SO_2 CEMs plus initial source test, WESP liquid flow rate, voltage, secondary currents and/or operating parameters, in conjunction with initial performance tests to establish excursion and exceedance, shall be monitored	SO_2 CEMs plus initial source test, weekly coal sampling (as received) with quarterly coal composites
Indicator Range	Initial source testing to establish correlation to SO_2 and coal quality, then establish SO_2 CEM and coal range appropriate	Initial source testing to establish correlation to SO_2 and coal quality, then establish SO_2 CEM and coal range appropriate
Data Collection Frequency	Continuous SO_2 CEM, weekly coal sampling (as received) with quarterly coal composites	Continuous SO_2 CEM, weekly coal sampling (as received) with quarterly coal composites
Averaging Period	3 hour rolling	3 hour rolling
Recordkeeping	Coal quality information will be kept in a designated hard copy or electronic archive, plus CEM data system records	Coal quality information will be kept in a designated hard copy or electronic archive, plus CEM data system records
QA/QC	WFGD/WESP will be maintained and operated in accordance with manufacturer specifications and recommendations	WFGD/WESP will be maintained and operated in accordance with manufacturer specifications and recommendations

5. Specific Record Keeping Requirements:

a) Pursuant to 40 CFR 60.52Da, the owner or operator of this unit shall maintain a record of applicable measurements, including CEM system, monitoring device, and performance testing measurements; all CEM system performance evaluations; all continuous monitoring system or monitoring device calibration checks; adjustments and maintenance performed on these systems and devices; and all other information required by 40 CFR 60.7 recorded in a permanent form suitable for inspection.

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

b) Pursuant to 40 CFR 60.7, the owner or operator of this unit shall maintain records of the occurrence and duration of any startup, shutdown, or malfunction in the operation of the affected facility, any malfunction of the air pollution control equipment; or any period during which a CEM system or emission monitoring device is inoperative.

c) Pursuant to 401 KAR 52:020, Section 26, and 401 KAR 50:045, Section 6, the owner or operator shall maintain the results of all compliance tests.

d) CAM Requirements

1. Pursuant to 40 CFR 64.9(b), the owner or operator shall record on a daily basis for the WFGD the following:

   a. The WFGD liquid pH in the reaction tank;
   b. Recycle pump amps and status.

2. Pursuant to 40 CFR 64.9(b), the owner or operator shall record, on a daily basis, voltages, or other parameters identified during the performance test for the WESP, as approved by the Division.

6. Specific Reporting Requirements:

a) Pursuant to 40 CFR 60.51Da, minimum data requirements which follow shall be maintained and furnished in the format specified by the Division. Owners or operators of facilities required to install continuous monitoring systems shall submit for every calendar quarter a written report of excess emissions (as defined in applicable sections) to the Division. All quarterly reports shall be postmarked by the thirtieth (30th) day following the end of each calendar quarter and shall include the following information:

1. The magnitude of the excess emission computed in accordance with the 401 40 CFR 60.7, any conversion factors used, and the date and time of commencement and completion of each time period of excess emissions.

2. All hourly averages shall be reported for sulfur dioxide and nitrogen oxides monitors. The hourly averages shall be made available in the format specified by the Division.

3. Specific identification of each period of excess emissions that occurs during startups, shutdowns, and malfunctions of the affected facility. The permittee shall determine the nature and cause of any malfunction (if known), and initiate the corrective action taken or preventive measures adopted.

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

4. The date and time identifying each period during which continuous monitoring system was inoperative except for zero and span checks and the nature of the system repairs or adjustments.

5. When no excess emissions have occurred or the continuous monitoring system(s) have not been inoperative, repaired, or adjusted, such information shall be stated in the report.

6. For sulfur dioxide and nitrogen oxides, all information listed in 40 CFR 60.51Da (b)(1 thru 9), shall be reported to the Division for each twenty-four (24) hour period.

7. If the minimum quantity of emission data as required by 40 CFR 60.49Da is not obtained for any 30 successive boiler operating days, the information specified in 40 CFR 60.51Da(c), obtained under the requirements of 40 CFR 60.48Da, shall be reported for that 30-day period.

8. If any sulfur dioxide standards as specified in 40 CFR 60.43 Da are exceeded during emergency conditions because of control system malfunction, the owner or operator shall submit a signed statement including all information as described in 40 CFR 60.51Da (d).

9. For any periods for which opacity, sulfur dioxide or nitrogen oxides emissions data are not available, the owner or operator shall submit a signed statement pursuant to 40 CFR 60.51Da (f) indicating if any changes were made in the operation of the emission control system during the period of data unavailability. Operations of control system and emissions units during periods of data unavailability are to be compared with operation of the control system and emissions units before and following the period of data unavailability.

10. The owner or operator shall submit a signed statement including all information as described in 40 CFR 60.51Da (h).

11. Pursuant to 40 CFR 60.51Da (i), for the purposes of the reports required under 401 KAR 59:005, Section 4, periods of excess emissions are defined as all six (6) minute periods during which the average opacity exceeds the applicable opacity standards as specified in 40 CFR 60.42Da (b). Opacity levels in excess of the applicable opacity standard and the date of such excesses are to be submitted to the Division each calendar quarter. As the COM system is located after the PJFF as an indicator of performance for that device but before the WFGD which provides additional particulate control, in the event of an opacity exceedance, as indicated by COM data, the owner or operator may conduct a Method 9 test to verify that

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

actual opacity from the stack complies with the applicable opacity standard, in which case the owner or operator shall promptly complete any necessary repairs to the PJFF. Such events shall not be considered in excess of the applicable opacity standard for reporting or other purposes. The CEM systems for sulfur dioxide and nitrogen oxide shall be certified, operated and maintained in accordance with the applicable provisions of 40 CFR 75, compliance with which shall be deemed compliance with monitoring provisions of 40 CFR 60.49a.

b) Excess emissions for emission units using a continuous monitoring system for measuring particulate matter are defined by any rolling 3-hour average of particulate matter, in units of pounds per million Btu (lb/MMBtu), greater than the applicable standard for each hour of operation of the facility. Average values may be obtained by integration over the averaging period or by arithmetically averaging a minimum of four (4) equally spaced, instantaneous particulate matter measurements per hour. Any time period exempted shall be considered before determining the excess average of particulate matter.

c) The permittee shall report the number of excursions (excluding startup, shut down, malfunction data) above the particulate matter standard, date and time of excursions, particulate matter value of the excursions, and percentage of the PM-CEMS data showing excursions above the applicable standard in each calendar quarter.

d) Pursuant to 401 KAR 52:020, Section 26, for exceedances that occur as a result of start-up, the permittee shall report:
(i) The type of start-up (cold, warm, or hot);
(ii) Whether or not the duration of the start-up exceeded the manufacturer's recommendation or typical, historical durations, and if so, an explanation of why the start-up exceeded recommended or typical durations.

e) CAM Requirements. Pursuant to 40 CFR 64.9(a) the owner or operator shall report the following information regarding its CAM plan according to the general reporting requirements specified in Section F.5.of this permit:

1. Number of exceedances or excursions;

2. Duration of each exceedance or excursion;

3. Cause of each exceedance or excursion;

4. Corrective actions taken on each exceedance or excursion;

5. Number of monitoring equipment downtime incidents;

6. Duration of each monitoring equipment downtime incident;

7. Cause of each monitoring equipment downtime incident;

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

8. Description of actions taken to implement a quality improvement plan and upon completion of the quality improvement plan, documentation that the plan was completed and reduced the likelihood of similar excursions or exceedances.

9. The permittee shall take a sample of fuel "as received" upon delivery schedule to the PCs. The samples taken shall be uniformly mixed to form a composite sample analyzed to determine fluoride content on a quarterly basis. This data, along with the baseline data established during the initial compliance and subsequent tests, shall be used to demonstrate compliance with the emission limits for HF.

e) The permittee shall report quarterly the twelve (12) month rolling total sulfur dioxide and nitrogen oxides emissions.

f) Pursuant to 401 KAR 52:020 and 401 KAR 63:020, the permittee shall take a sample of fuel as received upon delivery for a one year period upon issuance of this permit. The samples taken shall be uniformly mixed to form a composite sample analyzed to determine antimony, arsenic, beryllium, cadmium, chromium, lead, manganese, nickel, selenium and vanadium content on a quarterly basis and report to the Regional Office. After the initial one year period, sampling shall be reduced to an annual grab sample to be analyzed for the same substances and reported to the Regional Office. Fuel vendor certified data may also be used.

7. Specific Control Equipment Operating Conditions:

a) Pursuant to 401 KAR 50:055, Section 2 (5), the SCR, PJFF, WFGD, and WESP, shall be operated to maintain compliance with permitted emission limitations, in accordance with manufacturer's specifications or standard operating practices.

b) Pursuant to 401 KAR 59:005, Section 3(4), records regarding the maintenance of the control equipment shall be maintained.

c) See Section E for further requirements.

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Emissions Unit 32 - Auxiliary Steam Boiler

Description:
Design capacity rating: 100 MMBtu/hr
ASTM Grade No. 2-D S15 (Ultra Low Sulfur Diesel-ULSD)
Construction Commenced Date: July 6, 2006

Applicable Regulations:
40 CFR 60, Subpart Dc, Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units, incorporated by reference in 401 KAR 60:005, Section 3(1)(e).
401 KAR 59:015, New Indirect Heat Exchangers.
Section 112 (g) of the Clean Air Act Amendments of 1990
401 KAR 63:020, Potentially Hazardous Matter or Toxic Substances.
40 CFR 60, Appendix F, Quality Assurance Procedures
401 KAR 51:017, Prevention of significant deterioration of air quality applicable to major construction or modification commenced after September 22, 1982.

1. Operating Limitations:

The auxiliary steam boiler, except for testing purposes, shall only operate during periods when Emission Unit 1 or Emission Unit 31 are operating at less than 50 percent load. The auxiliary boiler shall not operate more than 2,000 hours in any twelve (12) consecutive months.

2. Emission Limitations:

a) Pursuant to 401 KAR 60:005, Section 3(1)(e), 401 KAR 59:015, Section 4(1)(c), 401 KAR 51:017, and Section 112 (g) of the Clean Air Act Amendments of 1990, particulate emissions shall not exceed 0.03 lb/MMBtu or 3.1 lb/hr based on three hour average.

b) Pursuant to 401 KAR 60:005, Section 3(1)(e) and 401 KAR 59:015, Section 4(2)(a), emissions from the auxiliary steam boiler shall not exceed twenty (20) percent opacity based on a six-minute average except that a maximum of twenty-seven (27) percent is allowed for not more than one (1) six (6) minute period per hour.

c) Pursuant to 401 KAR 60:005, Section 3(1)(b); 401 KAR 59:015, Section 5(1)(b); and 401 KAR 51:017, the fuel oil used must meet the sulfur content standards in ASTM Grade No. 2-D S15 (Ultra Low Sulfur Diesel-ULSD) or equivalent and cannot exceed a sulfur content of 15 ppm.

d) Pursuant to 401 KAR 51:017, carbon monoxide emissions shall not exceed 100 ppm by volume on a dry basis corrected to 3 percent oxygen or 0.078 lb/MMBtu and a 30-day rolling average.

e) Pursuant to Section 112 (g) of the Clean Air Act Amendments of 1990, hydrogen chloride emissions shall not exceed 0.0005 lbs/MMBtu of heat input.

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

3. Testing Requirements:

a) Pursuant to 401 KAR 59:005, Section 2(1) and 401 KAR 59:015, Section 8, the owner or operator shall demonstrate compliance with the applicable emission standards within sixty (60) days after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial startup of such facility.

b) Pursuant to Section 112 (g) of the Clean Air Act Amendments of 1990, a performance test to demonstrate compliance with the carbon monoxide and hydrogen chloride emission limits is not required. However the following requirements must be met.

1. To demonstrate initial compliance, a signed statement in the Notification of Compliance Status report that indicates that the unit burns only liquid fossil fuels other than residual oils, either alone or in combination with gaseous fuels.

2. To demonstrate continuous compliance, records must be kept that demonstrate that the unit burned only liquid fossil fuels other than residual oil, either alone or in combination with gaseous fuels. A signed statement must be included in each semiannual compliance report that indicates that the unit burned only liquid fossil fuels other than residual oils, either alone or in combination with gaseous fuels, during the reporting period.

c) Pursuant to 401 KAR 59:015, Section 8(1)(f), if the unit has operated during the previous 12 consecutive months, the owner or operator shall determine the opacity of emissions from the stack by EPA Reference Method 9 upon request by the Division.

d) See Section D for further requirements.

4. Specific Monitoring Requirements:

a) Pursuant to 52:020, Section 26, the owner or operator shall monitor the hours of operation during each twelve (12) consecutive months.

b) To demonstrate continuing compliance with the fuel oil sulfur content limitation, monitoring of operations shall consist of, on an as-received basis, fuel supplier certification, certified analysis or contract specifications of the sulfur content of the fuel oil to be combusted. The fuel supplier certification, certified analysis or contract specifications shall include the name of the oil supplier, sulfur content, and a statement that the oil meets the ULSD specifications and satisfies the requirements 401 KAR 60:005.

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

c) The fuel oil sulfur content and heating value shall be determined for the No. 2 fuel oil, as received, by fuel supplier certification that meets the USLD specifications.

d) Pursuant to 401 KAR 52:020, Section 26, the permittee shall perform a qualitative visual observation of the opacity emission from the stack once during every 100 hours of operation and maintain a log of the observations. If visible emissions from the stack are seen, then the opacity shall be determined by EPA Reference Method 9 and if the opacity reading is greater than 20% then the permittee must initiate an inspection of the equipment for any repairs. Hours of operation shall include any partial hour in which an auxiliary boiler has been fired to 75% of its rated steam capacity.

5. Specific Record Keeping Requirements:

a) Pursuant to 401 KAR 59:005, Section 3(4), the owner or operator of the indirect heat exchanger shall maintain a file of all measurements and performance testing measurements required by 401 KAR 59:005 recorded in a permanent form suitable for inspection.

b) Pursuant to 401 KAR 59:005, Section 3(2), the owner or operator of this unit shall maintain the records of the occurrence and duration of any startup, shutdown, or malfunction in the operation of the affected facility.

c) The owner or operator shall maintain the results of all compliance tests.

d) The owner or operator shall maintain records of hours of operation during each twelve (12) consecutive months.

e) Pursuant to 401 KAR 59:005, Section 3 (4), the owner or operator of the indirect heat exchanger shall maintain a file of all measurements, including monthly No. 2 fuel oil usage. The owner or operator shall maintain a file of the fuel supplier certification, certified analysis or contract specifications; and all other information required by 401 KAR 59:005 recorded in a permanent form suitable for inspection. The file shall be retained for at least five (5) years following the date of such measurements, maintenance, reports, and records.

f) Records of the ULSD used shall be maintained.

6. Specific Reporting Requirements:

a) Pursuant to 401 KAR 60:005, Section 3(1)(e), the owner or operator shall follow the applicable Reporting and Recordkeeping requirements specified in 40 CFR 60.48c.

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

7. Specific Control Equipment Operating Conditions:

a) Pursuant to 401 KAR 50:055, Section 5, the auxiliary steam boiler shall be operated in accordance with manufacturer's specifications or standard operating practices.

b) See Section E for further requirements.

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Emissions Unit 33 - Emergency Generator

Description:
12.5 MMBtu/hr - ASTM Grade No. 2-D S15 (ULSD) or equivalent fuel oil-fired Emergency Diesel Generator without oxidation catalyst or Non-Selective Catalytic Reduction (NSCR).
Construction Commenced Date: July 6, 2006

Applicable Regulations:
401 KAR 60:005, incorporating by reference 40 CFR 60, Subpart IIII New Source Performance Standards for Stationary Compression Ignition Internal Combustion Engines
401 KAR 63:002, incorporating by reference 40 CFR 63, Subpart ZZZZ National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines
401 KAR 51:017, Prevention of significant deterioration of air quality applicable to major construction or modification commenced after September 22, 1982.

1. Operating Limitations:

Pursuant to 401 KAR 51:017, the emergency generator, except for testing purposes, shall only operate during periods when Unit 31 is operating less than 50 percent load. The emergency generator shall limit hours of operation in accordance with the requirements of 40 CFR 60.4219 and 40 CFR 63.6675.

2. Emission Limitations (assumed 2007 model year):

a) Pursuant to 401 KAR 60:005, the emergency generator shall meet a NO_x plus non-methane hydrocarbon limit of 6.4 g/kw-hr, except during periods of startup, shutdown or malfunction.

b) Pursuant to 401 KAR 60:005, the emergency generator shall meet a CO limit of 3.5 g/hp-hr, except during periods of startup, shutdown or malfunction.

c) Pursuant to 401 KAR 60:005, the emergency generator shall meet a PM limit of 0.20 g/hp-hr, except during periods of startup, shutdown or malfunction

3. Testing Requirements:

a) Pursuant to 401 KAR 63:002, the owner or operator shall demonstrate compliance with the applicable emission standards upon startup.

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

b) The owner shall follow the testing requirement of CFR 60. 4212

c) See Section D for further requirements.

4. Specific Monitoring Requirements:

a) Pursuant to 401 KAR 63:002, the owner or operator shall install, calibrate, maintain, and operate a continuous parameter monitoring system, or alternative method, as allowed by regulation. The operating parameters are to be approved by the Division.

b) Pursuant to 40 CFR 60.4209, a non-resettable hour meter shall be installed on the emergency generator.

c) See Section D for further requirements.

5. Specific Record Keeping Requirements:

a) The owner or operator shall keep records pursuant to 40 CFR 60.4214.

b) Pursuant to 401 KAR 52:020, Section 26, the owner or operator shall maintain the results of all compliance tests.

c) Pursuant to 401 KAR 52:020, Section 26, the owner or operator shall maintain records of hours of operation during each twelve (12) consecutive month period.

6. Specific Reporting Requirements:

a) Pursuant to 401 KAR 60:005, Section 3(1)(e), the owner or operator shall follow the applicable Reporting and Recordkeeping requirements specified in 40 CFR 60.48c, and those in 40 CFR 60.4214.

b) Pursuant to 40 CFR 63 Subpart ZZZZ, the owner or operator shall make notifications required by 40 CFR 63.6645.

c) Pursuant to 40 CFR 63 Subpart ZZZZ, the owner or operator shall submit reports required by 40 CFR 63.6645.

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Emissions Unit: 34, 35 - Fossil Fuel Handling Operations-Coal Piles (FUGITIVES)

Description:

Active Southwest Fossil Fuel Pile "A"	Fuel Pile Storage and Maintenance Activities
Active Southeast Fossil Fuel Pile "B"	Fuel Pile Storage and Maintenance Activities

Control Equipment

Active Southwest Fossil Fuel Pile "A"	Compaction and Water Suppression
Active Southeast Fossil Fuel Pile "B"	Compaction and Water Suppression

Construction Commenced Date: July 6, 2006

Applicable Regulations:

401 KAR 63:010, Fugitive emissions, applicable to each affected facility which emits or may emit fugitive emissions and is not elsewhere subject to an opacity standard within the administrative regulations of the Division for Air Quality;
401 KAR 51:017, Prevention of significant deterioration of air quality applicable to major construction or modification commenced after September 22, 1982.

1. Operating Limitations:

a) Pursuant to 401 KAR 51:017 and 401 KAR 63:010, Section 3, reasonable precautions shall be taken to prevent particulate matter from becoming airborne. Such reasonable precautions shall include, as needed, but not be limited to the following:

1. Pursuant to *Secretary's Final Order, DAQ-27602-042, Filed September 28, 2007*, application of water, or suitable chemicals on material stockpiles, and other surfaces which can create airborne dusts;

2. Operation of hoods, fans, and fabric filters to enclose and vent the handling of dusty materials, or the use of water sprays or other measures to suppress the dust emissions during handling;

3. The prompt removal of earth or other material from a paved street which earth or other material has been transported thereto by trucking or other earth moving equipment or erosion by water;

4. Installation and use of compaction or other measures to suppress the dust emissions during handling.

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

b) Pursuant to 401 KAR 63:010, Section 3, discharge of visible fugitive dust emissions beyond the property line is prohibited.

c) No one shall allow earth or other material being transported by truck or earth moving equipment to be deposited onto a paved street or roadway, pursuant to 401 KAR 63:010, Section 4.

d) Pursuant to 401 KAR 51:017, the owner or operator shall apply compaction and water suppression control methods as BACT.

2. Emission Limitations:

None

3. Testing Requirements:

40 CFR 60 Appendix A, Reference Method 22 shall be used to determine opacity upon request by the Division.

4. Specific Monitoring Requirements:

a) Pursuant to 401 KAR 52:020, Section 26, the owner or operator shall perform a qualitative visual observation on a weekly basis and maintain a log of the observations and corrective actions.

b) See Section F for further requirements.

5. Specific Record Keeping Requirements:

a) Pursuant to 401 KAR 52:020, Section 26, records of the fossil fuels received and processed shall be maintained for emissions inventory purposes.

b) Pursuant to 401 KAR 52:020, Section 26, annual records estimating the tonnage hauled on plant roadways shall be maintained for emissions inventory purposes.

c) Pursuant to 401 KAR 52:020, Section 26, the owner or operator shall maintain a log of the date, time and results of the monitoring required in Subsection 4 above.

6. Specific Reporting Requirements:

See Section F for further requirements.

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

7. Specific Control Equipment Operating Conditions:

a) Pursuant to 401 KAR 50:055, Section 5 and 401 KAR 51:017, the dust water suppressant system for the coal stockpile operations shall be maintained and operated to ensure the emission units are in compliance with applicable requirements of 401 KAR 63:010, and in accordance with manufacturer's specifications and standard operating practices.

b) Plant roadways shall be paved and controlled with water to comply with 401 KAR 63:010.

c) Pursuant to 401 KAR 59:005, Section 3(4), records regarding the maintenance of the control equipment shall be maintained.

d) See Section E for further requirements.

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Emissions Unit: 37and 39 -- Fossil Fuel Handling Operations, Dust Control Devices, and Associated Systems (Please refer to Units 7, 8 and 9 for additional existing fossil fuel handling operation information)

Description:

Continuous Barge Unloader –

One Barge Unloader Bin

Conveyor System -

Conveyor Belt A:	From Continuous Barge Unloader to Conveyor B
Conveyor Belt B:	From Conveyor A to Transfer House/Conveyor C
Conveyor Belt C:	From Transfer House to Coal Sample House Bin
Conveyor Belt D:	From Coal Sample House Bin to Conveyor E1 or S
Conveyor Belt E1:	From Conveyor D to Active Storage and Crusher House
Conveyor Belts F1 & F2:	From Crusher House to Conveyors G1 & G2
Conveyor Belts G1 & G2:	From Conveyors F1 & F2 to Unit 1 & 2 Coal Silos
Conveyor Belt S:	From Conveyor D to One Inactive Fossil Fuel Pile
Reclaim Hopper & Conveyor Belt R1:	From One Inactive Fossil Fuel Pile to Crusher House

Construction Commenced Date: on or Before 1990

Crusher House -

Two crushers, fossil fuel crusher bin, and fuel blender: Crusher House Activities

Power House –

Six –Boiler Unit 2- fossil fuel silos: Boiler Unit 2 Coal Storage

Conveyor System –

Reclaim Conveyor Belt E2:	From boiler unit 2 Active Coal Piles "A & B" to Conveyor E3 or Conveyor E4
Conveyor Belt E3:	From Conveyor E2 to Conveyor E1
Conveyor Belt E4:	From Conveyor E2 to Conveyor R1 (used during emergencies only)
Fuel Blending System:	From Active Coal Storage to Conveyor E2

Control Equipment

EU#37-U/R Reclaim Vault Dust Collector (CDC02): Drop from Coal Feeders 1-7 to Conveyor E2

EU#39-boiler unit 2 Coal Silo Dust Collector (CDC04): Conveyors F1&2 and Drop to G1&2; Unit 31 Coal Silos

Construction Commenced Date: The TC2 Projedct commenced July 6, 2006.

NOTE: The former barge unloader dust collector (EU 36) or coal crusher dust collector (EU 38) are removed, hence other duct collection is being handled under EU 7 through 9

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Description

Conveyors: Enclosures, water suppression, low drops, and baghouse filters, hoods

Operating Rate–

Continuous Barge Unloader	Transfer Rates
One Barge Unloader	5,500 tons/hour

Conveyor System -

Conveyor Belt A:	5,500 tons/hour
Conveyor Belt B:	5,500 tons/hour
Conveyor Belt C:	5,500 tons/hour
Conveyor Belt D:	3,000 tons/hour
Conveyor Belt E1:	2,640 tons/hour
Conveyor Belt E2:	2,640 tons/hour
Conveyor Belt E3:	2,640 tons/hour
Conveyor Belt E4:	2,640 tons/hour
Southwest Fossil Fuel Reclaim Hopper:	800 tons/hour
Southeast Fossil Fuel Reclaim Hopper:	800 tons/hour
Conveyor Belts F1 & F2:	1,320 tons/hour
Conveyors G1 & G2	1.320 tons/hour
Conveyor Belt S:	1,650 tons/hour
Reclaim Hopper & Conveyor Belt R1:	1,320 tons/hour
Unit 31 Fuel Blending System:	800 tons/hour

Crusher House -

Two crushers, fossil fuel crusher bin, and fuel blender: 3,600 tons/hour

Power House -

Six-boiler unit 2- fossil fuel silos: 800 tons/hour

Applicable Regulations:

401 KAR 60:005, incorporating by reference 40 CFR 60, Subpart Y, Standards of Performance for Coal Preparation Plants for units commenced after October 24, 1974

401 KAR 51:017, Prevention of Significant Deterioration of Air Quality applicable to major construction or modification commenced after September 22, 1982.

1. Operating Limitations:

Pursuant to 401 KAR 51:017, the owner or operator shall utilize the following as BACT:

a) U/R Reclaim Vault: Dust Collector

b) Boiler unit 2 Coal Silo: Dust Collector

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

2. Emission Limitations:

a) Pursuant to 401 KAR 60:005 incorporating by reference 40 CFR 60.252, the owner or operator subject to the provisions of this regulation shall not cause to be discharged into the atmosphere from any coal processing and conveying equipment, coal storage system, or transfer and loading system processing coal, gases which exhibit 20 percent opacity or greater.

b) Pursuant to 401 KAR 51:017, the dust collectors utilized shall exhibit a particulate design control efficiency of at least 99%.

3. Testing Requirements:

Pursuant to 401 KAR 60:005, Section 3(1)(ff) incorporating by reference, 40 CFR 60.254, EPA Reference Method 9 and the procedures in 40 CFR 60.11 shall be used to determine opacity upon request by the Division.

4. Specific Monitoring Requirements:

Pursuant to 401 KAR 52:020, Section 26, the owner or operator shall perform a qualitative visual observation of the opacity of emissions from each stack on a weekly basis and maintain a log of the observations. If visible emissions from any stack are seen, the owner or operator shall determine the opacity of emissions by Reference Method 9 and instigate an inspection of the control equipment making any necessary repairs.

5. Specific Record Keeping Requirements:

a) Pursuant to 401 KAR 52:020, Section 26, the owner or operator shall maintain the records of amount of coal received and processed.

b) Pursuant to 401 KAR 52:020, Section 26, the owner or operator shall maintain the results of all compliance tests. The owner or operator shall record each week, the date and time of each observation and the results of visible emissions monitoring. In case of exceedances, the owner or operator must record the reason (if known) and the measures taken to minimize or eliminate exceedances.

6. Specific Reporting Requirements:

See Section F for further requirements.

7. Specific Control Equipment Operating Conditions:

a) Pursuant to 401 KAR 50:055, Section 5, the enclosures/partial enclosures, baghouses, rotoclones, water spray equipment, bin vent filters, conveyor systems, fuel blending operations, fossil fuel storage silos, and stackout chute shall be maintained and operated to ensure the emission units are in compliance with applicable requirements of 40 CFR 60, Subpart Y and in accordance with manufacturer's specifications or standard operating practices.

b) Pursuant to 401 KAR 59:005, Section 3(4), records regarding the maintenance and use/operation of the control equipment listed in 7(a) shall be maintained.

c) See Section E for further requirements.

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Emission Unit: 41 - Linear Mechanical Draft Cooling Tower (12 cells)

Description:

Control Equipment:	0.0005% Drift Eliminators
Circulating Water Rate:	173,250 Gallons per Minute
Construction Commenced Date:	July 6, 2006

Applicable Regulations:

401 KAR 63:010, Fugitive emissions, applicable to each affected facility which emits or may emit fugitive emissions and is not elsewhere subject to an opacity standard within the administrative regulations of the Division for Air Quality

401 KAR 51:017, Prevention of Significant Deterioration of Air Quality applicable to major construction or modification commenced after September 22, 1982.

1. **Operating Limitations:**
   a) Pursuant to 401 KAR 63:010, Section 3, reasonable precautions shall be taken to prevent particulate matter from becoming airborne.

   b) Pursuant to 401 KAR 63:010, Section 3, discharge of visible fugitive dust emissions beyond the property line is prohibited.

2. **Emission Limitations:**
   a) Pursuant to 401 KAR 51:017, the cooling tower shall utilize 0.0005% Drift Eliminators.

   b) Pursuant to 401 KAR 63:010, Section 3, reasonable precautions shall be taken to prevent particulate matter from becoming airborne.

3. **Testing Requirements:**
   Initial performance test to verify drift percent achieved by the drift eliminator will be conducted based on the Cooling Technology Institute (CTI) Acceptance Test Code (ATC) # 140

4. **Specific Monitoring Requirements:**
   Pursuant to 401 KAR 52:020, Section 26, the permittee shall monitor total dissolved solids content of the circulating water on a monthly basis.

5. **Specific Record Keeping Requirements:**
   a) Pursuant to 401 KAR 52:020, Section 26, the owner or operator shall maintain records of the manufacturer's design of the Drift Eliminators.

   b) Pursuant to 401 KAR 52:020, Section 26, the owner or operator shall maintain records of maximum pumping capacity and monthly records of the total dissolved solids content.

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

6. Specific Reporting Requirements:

See Section F for further requirements.

7. Specific Control Equipment Operating Conditions:

a) Pursuant to 401 KAR 50:055, Section 5, the drift eliminators shall be maintained and operated to ensure the emission units are in compliance with applicable requirements of 401 KAR 63:010 and in accordance with manufacturer's specifications or standard operating practices.

b) See Section E for further requirements.

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Emission Unit: 42 - Fly Ash Storage Silo and Dust Control Device

Description:
Fly Ash from Units 1 and 31 into Fly Ash Silo Bins and Fly Ash from Fly Ash Silos Bins into either Dry Bulk Trailers with tractor, or Pneumatically Conveyed to the Covered barge, or sent to the wet Mixing Tank to be Sluiced to the Fly Ash pond

Operating rate:	Material throughput 56 tons per hour
Controls:	Fly Ash Dust Collector (FDC01)
Construction commenced:	July 6, 2006

Applicable Regulations:
401 KAR 59:010, New Process Operations, applicable to an emission unit, which commenced on or after 1972;
401 KAR 51:017, Prevention of Significant Deterioration of Air Quality applicable to major construction or modification commenced after September 22, 1982.

1. Operating Limitations:
Pursuant to 401 KAR 51:017, the owner or operator shall utilize a dust collector as BACT.

2. Emission Limitations:

a) Pursuant to 401 KAR 59:010, Section 3(1), the owner or operator shall not cause to be discharged into the atmosphere from any of the above listed units emissions greater than twenty (20) percent opacity.

b) Pursuant to 401 KAR 59:010, particulate matter emissions from the bin dust collector shall not exceed $[17.31P^{0.16}]$ lbs/hr based on a three-hour average, where P is the material throughput rate in tons/hour.

3. Testing Requirements:
None

4. Specific Monitoring Requirements:
Pursuant to 401 KAR 52:020, Section 26, the owner or operator shall perform a qualitative visual observation of the opacity of emissions from the stack on a weekly basis and maintain a log of the observations. If visible emissions from any stack included in this emission unit are seen, then the owner or operator shall determine the opacity of emissions by Reference Method 9 and perform an inspection of the control equipment for any necessary repairs.

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

5. Specific Record Keeping Requirements:

a) Pursuant to 401 KAR 52:020, Section 26, the owner or operator shall maintain the records of amount of fly ash processed.

b) Pursuant to 401 KAR 59:005, Section 3(4), the owner or operator shall maintain the results of all compliance tests and calculations.

c) Pursuant to 401 KAR 52:020, Section 26, the owner or operator shall record each week the date, time and the results of the visible emissions monitoring. In case of an exceedance, the owner or operator must record the reason (if known) and the measures taken to minimize or eliminate the exceedance.

6. Specific Reporting Requirements:

See Section F for further requirements.

7. Specific Control Equipment Operating Conditions:

a) Pursuant to 401 KAR 50:055, Section 5, the dust collector equipment shall be maintained and operated to ensure the emission unit is in compliance with applicable requirements of 401 KAR 59:010 and in accordance with manufacturer's specifications or standard operating practices

b) Pursuant to 401 KAR 59:005, Section 3(4), records regarding the maintenance of the control equipment shall be maintained.

c) See Section E for further requirements.

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Emission Unit: 43 - Waste Ash Storage Silo and Dust Control Device

Description:
Waste Ash from Unit 31 into Waste Ash Silo Bins and Waste Ash from Waste Ash Silo Bins into Dry Bulk Trailers with Tractors & Waste Ash Storage Activities
Operating Rate: Material Throughput: 40 tons/hour
Control Equipment: Waste Ash Bin Vent Filter (WBV01)
Construction Commenced: July 6, 2006

Applicable Regulations:
401 KAR 59:010, New Process Operations, applicable to an emission unit, which commenced on or after 1972;
401 KAR 51:017, Prevention of Significant Deterioration of Air Quality applicable to major construction or modification commenced after September 22, 1982.

1. Operating Limitations:
Pursuant to 401 KAR 51:017, the owner or operator shall utilize a bin vent filter as BACT.

2. Emission Limitations:

a) Pursuant to 401 KAR 59:010, Section 3(1), the owner or operator shall not cause to be discharged into the atmosphere from any of the above listed units emissions greater than twenty (20) percent opacity.

b) Pursuant to 401 KAR 59:010, particulate matter emissions from the bin vent filter shall not exceed [$17.31P^{0.16}$] lbs/hr based on a three-hour average, where P is the material throughput rate in tons/hour.

3. Testing Requirements:
None

4. Specific Monitoring Requirements:
Pursuant to 401 KAR 52:020, Section 26, the owner or operator shall perform a qualitative visual observation of the opacity of emissions from the stack on a weekly basis and maintain a log of the observations. If visible emissions from any stack included in this emission unit are seen, then the owner or operator shall determine the opacity of emissions by Reference Method 9 and perform an inspection of the control equipment for any necessary repairs.

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

5. Specific Record Keeping Requirements:

a) Pursuant to 401 KAR 52:020, Section 26, the owner or operator shall maintain the records of amount of waste ash processed.

b) Pursuant to 401 KAR 59:005, Section 3(4), the owner or operator shall maintain the results of all compliance tests and calculations.

c) Pursuant to 401 KAR 52:020, Section 26, the owner or operator shall record each week the date, time and the results of the visible emissions monitoring. In case of an exceedance, the owner or operator must record the reason (if known) and the measures taken to minimize or eliminate the exceedance.

6. Specific Reporting Requirements:

See Section F for further requirements.

7. Specific Control Equipment Operating Conditions:

a) Pursuant to 401 KAR 50:055, Section 5, the bin vent filter shall be maintained and operated to ensure the emission unit is in compliance with applicable requirements of 401 KAR 59:010 and in accordance with manufacturer's specifications or standard operating practices

b) Pursuant to 401 KAR 59:005, Section 3(4), records regarding the maintenance of the control equipment shall be maintained.

c) See Section E for further requirements.

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Emission Unit: 44 - Powdered Activated Carbon (PAC) Silo and Dust Control Device

Description:
PAC Silo storage for mercury control
Operating Rate: Material Throughput: 40 tons/hour
Control Equipment: PAC Silo Bin Vent Filter (PBV-01)
Construction Commenced: July 6, 2006

Applicable Regulations:
401 KAR 59:010, New Process Operations, applicable to an emission unit, which commenced on or after 1972
401 KAR 51:017, Prevention of Significant Deterioration of Air Quality applicable to major construction or modification commenced after September 22, 1982.

1. Operating Limitations:
Pursuant to 401 KAR 51:017, the owner or operator shall utilize a bin vent filter as BACT.

2. Emission Limitations:

a) Pursuant to 401 KAR 59:010, Section 3(1), the owner or operator shall not cause to be discharged into the atmosphere from any of the above listed unit emissions greater than twenty (20) percent opacity.

b) Pursuant to 401 KAR 59:010, particulate matter emissions from the bin vent filter shall not exceed $[17.31P^{0.16}]$ lbs/hr based on a three-hour average, where P is the material throughput rate in tons/hour.

3. Testing Requirements:
None

4. Specific Monitoring Requirements:
Pursuant to 401 KAR 52:020, Section 26, the owner or operator shall perform a qualitative visual observation of the opacity of emissions from the stack on a weekly basis and maintain a log of the observations. If visible emissions from any stack included in this emission unit are seen, then the owner or operator shall determine the opacity of emissions by Reference Method 9 and perform an inspection of the control equipment for any necessary repairs.

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

5. Specific Record Keeping Requirements:

a) Pursuant to 401 KAR 52:020, Section 26, the owner or operator shall maintain the records of amount of PAC processed.

b) Pursuant to 401 KAR 59:005, Section 3(4), the owner or operator shall maintain the results of all compliance tests and calculations.

c) Pursuant to 401 KAR 52:020, Section 26, the owner or operator shall record each week the date, time and the results of the visible emissions monitoring. In case of an exceedance, the owner or operator must record the reason (if known) and the measures taken to minimize or eliminate the exceedance.

6. Specific Reporting Requirements:

See Section F for further requirements.

7. Specific Control Equipment Operating Conditions:

a) Pursuant to 401 KAR 50:055, Section 5, the bin vent filter shall be maintained and operated to ensure the emission unit is in compliance with applicable requirements of 401 KAR 59:010 and in accordance with manufacturer's specifications or standard operating practices

b) Pursuant to 401 KAR 59:005, Section 3(4), records regarding the maintenance of the control equipment shall be maintained.

c) See Section E for further requirements.

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Emission Unit: 45 - Hydrated Lime Storage Silo and Dust Control Device

Description:
Hydrated Lime Silo, Hydrated lime storage for SO_3 control and conditioning boiler unit 2 PJFF bags

Operating Rate:	Material Throughput: 40 tons/hour
Control Equipment:	Hydrated Lime Silo Bin Vent Filter (HBV-01)
Construction Commenced	July 6, 2006

Applicable Regulations:
401 KAR 59:010, New Process Operations, applicable to an emission unit, which commenced on or after 1972
401 KAR 51:017, Prevention of Significant Deterioration of Air Quality applicable to major construction or modification commenced after September 22, 1982.

1. Operating Limitations:
Pursuant to 401 KAR 51:017, the owner or operator shall utilize a bin vent filter as BACT.

2. Emission Limitations:

a) Pursuant to 401 KAR 59:010, Section 3(1), the owner or operator shall not cause to be discharged into the atmosphere from any of the above listed units emissions greater than twenty (20) percent opacity.

b) Pursuant to 401 KAR 59:010, particulate matter emissions from the bin vent filter shall not exceed $[17.31P^{0.16}]$ lbs/hr based on a three-hour average, where P is the material throughput rate in tons/hour.

3. Testing Requirements:
None

4. Specific Monitoring Requirements:
Pursuant to 401 KAR 52:020, Section 26, the owner or operator shall perform a qualitative visual observation of the opacity of emissions from the stack on a weekly basis and maintain a log of the observations. If visible emissions from any stack included in this emission unit are seen, then the owner or operator shall determine the opacity of emissions by Reference Method 9 and perform an inspection of the control equipment for any necessary repairs.

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

5. Specific Record Keeping Requirements:

a) Pursuant to 401 KAR 52:020, Section 26, the owner or operator shall maintain the records of amount of PAC processed.

b) Pursuant to 401 KAR 59:005, Section 3(4), the owner or operator shall maintain the results of all compliance tests and calculations.

c) Pursuant to 401 KAR 52:020, Section 26, the owner or operator shall record each week the date, time and the results of the visible emissions monitoring. In case of an exceedance, the owner or operator must record the reason (if known) and the measures taken to minimize or eliminate the exceedance.

6. Specific Reporting Requirements:

See Section F for further requirements.

7. Specific Control Equipment Operating Conditions:

a) Pursuant to 401 KAR 50:055, Section 5, the bin vent filter shall be maintained and operated to ensure the emission unit is in compliance with applicable requirements of 401 KAR 59:010 and in accordance with manufacturer's specifications or standard operating practices

b) Pursuant to 401 KAR 59:005, Section 3(4), records regarding the maintenance of the control equipment shall be maintained.

c) See Section E for further requirements.

SECTION C - INSIGNIFICANT ACTIVITIES

The following listed activities have been determined to be insignificant activities for this source pursuant to 401 KAR 52:020, Section 6. Although these activities are designated as insignificant the permittee must comply with the applicable regulation. Process and emission control equipment at each insignificant activity subject to an opacity standard shall be inspected monthly and a qualitative visible emissions evaluation made. Results of the inspection, evaluation, and any corrective action shall be recorded in a log.

	Description	Generally Applicable Regulation
1.	Two station #2 fuel oil tanks, each 100,000 gallons (401 KAR 59:050), and auxiliary boiler day tank storing #2 fuel oil with a size of 16,000 gallons. General recordkeeping requirements - 40 CFR 60.116b(a) and (b)	401 KAR 59:050 40 CFR 60.116b(a) and (b)
2.	Metal degreaser using a maximum throughput of 832 gallons/year solvent.	NA
3.	3,000 gallon unleaded gasoline storage tank.	NA
4.	3,000 gallon diesel storage tank.	NA
5.	1,100 gallon used oil storage tank.	NA
6.	1,100 gallon #1 fuel oil tank.	NA
7.	Wet fly ash collection system	401 KAR 59:010
8.	Infrequent evaporation of boiler cleaning solutions.	NA
9.	Infrequent burning of De Minimis quantities of used oil for energy recovery.	NA
10.	Paved and Unpaved Roads.	401 KAR 63:010
11.	Preheater (for CTs Units 25 & 26) Max. Heat Input 10.9 MMBtu/hr.	401 KAR 59:010
12.	Preheater (for CTs Units 27 & 28) Max. Heat Input 10.9 MMBtu/hr.	401 KAR 59:010
13.	Preheater (for CTs Units 29 & 30) Max. Heat Input 10.9 MMBtu/hr.	401 KAR 59:010
14.	Gypsum Storage Piles	401 KAR 63:010
15.	Coal (inactive outdoor) and Limestone Storage Piles (active indoor)	401 KAR 63:010
16.	Bottom Ash and Debris Collection Basin	401 KAR 63:010
17.	Bottom Ash Reclaim Operation	401 KAR 63:010
18.	Three bottom ash transport vehicles	401 KAR 59:010
19.	Maintenance Shop Activities	NA
20.	Miscellaneous Water Storage Tanks	NA
21.	Anhydrous Ammonia Storage Tanks	401 KAR 68
22.	Fire Water Pump Engine	NA
23.	SO3 Mitigation System	NA
24.	Gypsum Barge Load-out Facility	401 KAR 63:010
25.	Flyash Barge Load-out Facility	401 KAR 63:010

SECTION D - SOURCE EMISSION LIMITATIONS AND TESTING REQUIREMENTS

1. As required by Section 1b of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26; compliance with annual emissions and processing limitations contained in this permit, shall be based on emissions and processing rates for any twelve (12) consecutive months.

2. Compliance with visible emission limitations for indirect heat exchanger Unit 01, shall be determined by using EPA reference Method 9. Alternatively, the owner or operator may use COM in determining compliance with opacity.

3. Nitrogen oxides, sulfur dioxide, PM (filterable), formaldehyde, visible emissions (opacity), mercury, and carbon monoxide emissions, measured by applicable reference methods, or an equivalent or alternative method specified in 40 C.F.R. Chapter I, or by a test method specified in the state implementation plan shall not exceed the respective limitations specified herein.

4. Emission Unit 31 shall be performance tested initially for compliance with the emission standards for PM/PM_{10} (filterable and condensable), sulfur dioxide (SO_2), nitrogen oxides (NO_x), and carbon monoxide (CO), VOCs, mercury, and H_2SO_4, lead and fluorides by applicable reference methods, or by equivalent or alternative test methods specified in this permit or approved by the cabinet or U.S. EPA. For Emission Unit 31 annual performance tests for PM/PM_{10}, VOCs, and lead will be conducted.

5. After the initial compliance test for Emission Unit 31, and CEMS/COMs certification as stated in 401 KAR 50:055, continuing compliance with the emission standards shall be determined by continuous monitoring systems for NO_x, CO, PM/PM_{10}, mercury, and SO_2. Continuing compliance with the emission standards for H_2SO_4 mist and Fluorides shall be determined by following provision of the CAM plan in Section B of this permit.

6. Pursuant to 401 KAR 52:020, Section 26, the consecutive twelve(12) month rolling total emissions in tons per year from Emission Units 31, 32, and 33 shall be less than: 1,523 for NO_x tons, 3,264 for SO_2 , and 0.55 for lead.

7. Pursuant to 401 KAR 50:045, the permittee shall evaluate the relationship between CO and VOC for Emission Unit 31 during the initial and annual stack tests. Results of this evaluation shall be submitted to the Division within sixty days after submitting the annual test results.

SECTION E - SOURCE CONTROL EQUIPMENT REQUIREMENTS

Pursuant to 401 KAR 50:055, Section 2(5), at all times, including periods of startup, shutdown and malfunction, owners and operators shall, to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Division which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source.

SECTION F - MONITORING, RECORD KEEPING, AND REPORTING REQUIREMENTS

1. Pursuant to Section 1b-IV-1 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26, when continuing compliance is demonstrated by periodic testing or instrumental monitoring, the permittee shall compile records of required monitoring information that include:
   a. Date, place as defined in this permit, and time of sampling or measurements;
   b. Analyses performance dates;
   c. Company or entity that performed analyses;
   d. Analytical techniques or methods used;
   e. Analyses results; and
   f. Operating conditions during time of sampling or measurement.

2. Records of all required monitoring data and support information, including calibrations, maintenance records, and original strip chart recordings, and copies of all reports required by the Division for Air Quality, shall be retained by the permittee for a period of five years and shall be made available for inspection upon request by any duly authorized representative of the Division for Air Quality [Sections 1b-IV-2 and 1a-8 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].

3. In accordance with the requirements of 401 KAR 52:020 Section 3(1)h the permittee shall allow authorized representatives of the Cabinet to perform the following during reasonable times:
   a. Enter upon the premises to inspect any facility, equipment (including air pollution control equipment), practice, or operation;
   b. To access and copy any records required by the permit:
   c. Sample or monitor, at reasonable times, substances or parameters to assure compliance with the permit or any applicable requirements.

   Reasonable times are defined as during all hours of operation, during normal office hours; or during an emergency.

4. No person shall obstruct, hamper, or interfere with any Cabinet employee or authorized representative while in the process of carrying out official duties. Refusal of entry or access may constitute grounds for permit revocation and assessment of civil penalties.

5. Summary reports of any monitoring required by this permit shall be submitted to the Regional Office listed on the front of this permit at least every six (6) months during the life of this permit, unless otherwise stated in this permit. For emission units that were still under construction or which had not commenced operation at the end of the 6-month period covered by the report and are subject to monitoring requirements in this permit, the report shall indicate that no monitoring was performed during the previous six months because the emission unit was not in operation [Sections 1b-V-1 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].

SECTION F - MONITORING, RECORDKEEPING, AND REPORTING REQUIREMENTS (CONTINUED)

6. The semi-annual reports are due by January 30th and July 30th of each year. All reports shall be certified by a responsible official pursuant to 401 KAR 52:020 Section 23. If continuous emission and opacity monitors are required by regulation or this permit, data shall be reported in accordance with the requirements of 401 KAR 59:005, General Provisions, Section 3(3). All deviations from permit requirements shall be clearly identified in the reports.

7. In accordance with the provisions of 401 KAR 50:055, Section 1 the owner or operator shall notify the Regional Office listed on the front of this permit concerning startups, shutdowns, or malfunctions as follows:
   a. When emissions during any planned shutdowns and ensuing startups will exceed the standards, notification shall be made no later than three (3) days before the planned shutdown, or immediately following the decision to shut down, if the shutdown is due to events which could not have been foreseen three (3) days before the shutdown.
   b. When emissions due to malfunctions, unplanned shutdowns and ensuing startups are or may be in excess of the standards, notification shall be made as promptly as possible by telephone (or other electronic media) and shall be submitted in writing upon request.

8. The owner or operator shall report emission related exceedances from permit requirements including those attributed to upset conditions (other than emission exceedances covered by Section F.7 above) to the Regional Office listed on the front of this permit within 30 days. Deviations from permit requirements, including those previously reported under F.7 above, shall be included in the semiannual report required by F.6 [Sections 1b-V, 3 and 4 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].

9. Pursuant to 401 KAR 52:020, Permits, Section 21, the permittee shall annually certify compliance with the terms and conditions contained in this permit, by completing and returning a Compliance Certification Form (DEP 7007CC) (or an alternative approved by the regional office) to the Regional Office listed on the front of this permit and the U.S. EPA in accordance with the following requirements:
   a. Identification of the term or condition;
   b. Compliance status of each term or condition of the permit;
   c. Whether compliance was continuous or intermittent;
   d. The method used for determining the compliance status for the source, currently and over the reporting period.
   e. For an emissions unit that was still under construction or which has not commenced operation at the end of the 12-month period covered by the annual compliance certification, the permittee shall indicate that the unit is under construction and that compliance with any applicable requirements will be demonstrated within the timeframes specified in the permit.

SECTION F - MONITORING, RECORDKEEPING, AND REPORTING REQUIREMENTS (CONTINUED)

f. The certification shall be postmarked by January 30th of each year. Annual compliance certifications shall be mailed to the following addresses:

Division for Air Quality
Florence Regional Office
8020 Veterans Memorial drive
Suite 110, Florence, KY 41042

U.S. EPA Region 4
Air Enforcement Branch
Atlanta Federal Center
61 Forsyth St.
Atlanta, GA 30303-8960

Division for Air Quality
Central Files
200 Fair Oaks Lane, 1st Floor
Frankfort, KY 40601

10. In accordance with 401 KAR 52:020, Section 22, the permittee shall provide the Division with all information necessary to determine its subject emissions within thirty (30) days of the date the KYEIS emission survey is mailed to the permittee.

SECTION G - GENERAL PROVISIONS

1. General Compliance Requirements

   a. The permittee shall comply with all conditions of this permit. Noncompliance shall be a violation of 401 KAR 52:020 Section 3(1)(b) and a violation of Federal Statute 42 USC 7401 through 7671q (the Clean Air Act). Noncompliance with this permit is grounds for enforcement action including but not limited to termination, revocation and reissuance, revision or denial of a permit [Section 1a-3 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020 Section 26].

   b. The filing of a request by the permittee for any permit revision, revocation, reissuance, or termination, or of a notification of a planned change or anticipated noncompliance, shall not stay any permit condition [Section 1a-6 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].

   c. This permit may be revised, revoked, reopened and reissued, or terminated for cause in accordance with 401 KAR 52:020, Section 19. The permit will be reopened for cause and revised accordingly under the following circumstances:
      (1) If additional applicable requirements become applicable to the source and the remaining permit term is three (3) years or longer. In this case, the reopening shall be completed no later than eighteen (18) months after promulgation of the applicable requirement. A reopening shall not be required if compliance with the applicable requirement is not required until after the date on which the permit is due to expire, unless this permit or any of its terms and conditions have been extended pursuant to 401 KAR 52:020, Section 12;
      (2) The Cabinet or the U. S. EPA determines that the permit must be revised or revoked to assure compliance with the applicable requirements;
      (3) The Cabinet or the U. S. EPA determines that the permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the permit;
      (4) New requirements become applicable to a source subject to the Acid Rain Program.

      Proceedings to reopen and reissue a permit shall follow the same procedures as apply to initial permit issuance and shall affect only those parts of the permit for which cause to reopen exists. Reopenings shall be made as expeditiously as practicable. Reopenings shall not be initiated before a notice of intent to reopen is provided to the source by the Division, at least thirty (30) days in advance of the date the permit is to be reopened, except that the Division may provide a shorter time period in the case of an emergency.

   d. The permittee shall furnish information upon request of the Cabinet to determine if cause exists for modifying, revoking and reissuing, or terminating the permit; or to determine compliance with the conditions of this permit [Sections 1a- 7 and 8 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].

   e. Emission units described in this permit shall demonstrate compliance with applicable requirements if requested by the Division [401 KAR 52:020 Section 3(1)(c)].

SECTION G - GENERAL PROVISIONS (CONTINUED)

f. The permittee, upon becoming aware that any relevant facts were omitted or incorrect information was submitted in the permit application, shall promptly submit such supplementary facts or corrected information to the permitting authority [401 KAR 52:020, Section 7(1)].

g. Any condition or portion of this permit which becomes suspended or is ruled invalid as a result of any legal or other action shall not invalidate any other portion or condition of this permit [Section 1a-14 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].

h. The permittee shall not use as a defense in an enforcement action the contention that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance [Section 1a-4 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].

i. Except for requirements identified in this permit as state-origin requirements, all terms and conditions shall be enforceable by the United States Environmental Protection Agency and citizens. [Section 1a-15-b of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].

j. This permit shall be subject to suspension if the permittee fails to pay all emissions fees within 90 days after the date of notice as specified in 401 KAR 50:038, Section 3(6) [Section 1a-10 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].

k. Nothing in this permit shall alter or affect the liability of the permittee for any violation of applicable requirements prior to or at the time of permit issuance [401 KAR 52:020, Section 11(3) 2.].

l. This permit does not convey property rights or exclusive privileges [Section 1a-9 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].

m. Issuance of this permit does not relieve the permittee from the responsibility of obtaining any other permits, licenses, or approvals required by the Cabinet or any other federal, state, or local agency.

n. Nothing in this permit shall alter or affect the authority of U.S. EPA to obtain information pursuant to Federal Statute 42 USC 7414, Inspections, monitoring, and entry [401 KAR 52:020, Section 11(3) 4.].

o. Nothing in this permit shall alter or affect the authority of U.S. EPA to impose emergency orders pursuant to Federal Statute 42 USC 7603, Emergency orders [401 KAR 52:020, Section 11(3) 1.].

SECTION G - GENERAL PROVISIONS (CONTINUED)

p. This permit consolidates the authority of any previously issued PSD, NSR, or Synthetic Minor source preconstruction permit terms and conditions for various emission units and incorporates all requirements of those existing permits into one single permit for this source.

q. Pursuant to 401 KAR 52:020, Section 11, a permit shield shall not protect the owner or operator from enforcement actions for violating an applicable requirement prior to or at the time of permit issuance. Compliance with the conditions of this permit shall be considered compliance with:
(1) Applicable requirements that are included and specifically identified in the permit and
(2) Non-applicable requirements expressly identified in this permit.

r. The permittee shall submit a startup and shut down plan to implement the requirements of this permit and 401 KAR 50:055. The plan shall be submitted at least ninety (90) days prior to the startup of the Emission Unit #31 for the Division's approval. The startup/shutdown plan will be accessible for public review at the Division's central office and the regional office.

s. The permittee shall provide the Division the final design information consistent with Kentucky Open Records Act. The design plan will be accessible for public review at the Division's central office and the regional office.

2. Permit Expiration and Reapplication Requirements

a. This permit shall remain in effect for a fixed term of five (5) years following the original date of issue. Permit expiration shall terminate the source's right to operate unless a timely and complete renewal application has been submitted to the Division at least six months prior to the expiration date of the permit. Upon a timely and complete submittal, the authorization to operate within the terms and conditions of this permit, including any permit shield, shall remain in effect beyond the expiration date, until the renewal permit is issued or denied by the Division [401 KAR 52:020, Section 12].

b. The authority to operate granted shall cease to apply if the source fails to submit additional information requested by the Division after the completeness determination has been made on any application, by whatever deadline the Division sets [401 KAR 52:020 Section 8(2)].

3. Permit Revisions

a. A minor permit revision procedure may be used for permit revisions involving the use of economic incentive, marketable permit, emission trading, and other similar approaches, to the extent that these minor permit revision procedures are explicitly provided for in the SIP or in applicable requirements and meet the relevant requirements of 401 KAR 52:020, Section 14(2).

SECTION G - GENERAL PROVISIONS (CONTINUED)

b. This permit is not transferable by the permittee. Future owners and operators shall obtain a new permit from the Division for Air Quality. The new permit may be processed as an administrative amendment if no other change in this permit is necessary, and provided that a written agreement containing a specific date for transfer of permit responsibility coverage and liability between the current and new permittee has been submitted to the permitting authority within ten (10) days following the transfer.

4. Construction, Start-Up, and Initial Compliance Demonstration Requirements

Pursuant to a duly submitted application the Kentucky Division for Air Quality hereby authorizes the construction of the equipment described herein, emission points 31-42 in accordance with the terms and conditions of this permit.

a. Construction of any process and/or air pollution control equipment authorized by this permit shall be conducted and completed only in compliance with the conditions of this permit.

b. Within thirty (30) days following commencement of construction and within fifteen (15) days following start-up and attainment of the maximum production rate specified in the permit application, or within fifteen (15) days following the issuance date of this permit, whichever is later, the permittee shall furnish to the Regional Office listed on the front of this permit in writing, with a copy to the Division's Frankfort Central Office, notification of the following:
   (1) The date when construction commenced.
   (2) The date of start-up of the affected facilities listed in this permit.
   (3) The date when the maximum production rate specified in the permit application was achieved.

c. Pursuant to 401 KAR 52:020, Section 3(2), unless construction is commenced within eighteen (18) months after the permit is issued, or begins but is discontinued for a period of eighteen (18) months or is not completed within a reasonable timeframe then the construction and operating authority granted by this permit for those affected facilities for which construction was not completed shall immediately become invalid. Upon written request, the Cabinet may extend these time periods if the source shows good cause.

d. For those affected facilities for which construction is authorized by this permit, a source shall be allowed to construct with the proposed permit. Operational or final permit approval is not granted by this permit until compliance with the applicable standards specified herein has been demonstrated pursuant to 401 KAR 50:055. If compliance is not demonstrated within the prescribed timeframe provided in 401 KAR 50:055, the source shall operate thereafter only for the purpose of demonstrating compliance, unless otherwise authorized by Section I of this permit or order of the Cabinet.

SECTION G - GENERAL PROVISIONS (CONTINUED)

e. This permit shall allow time for the initial start-up, operation, and compliance demonstration of the affected facilities listed herein. However, within sixty (60) days after achieving the maximum production rate at which the affected facilities will be operated but not later than 180 days after initial start-up of such facilities, the permittee shall conduct a performance demonstration on the affected facilities in accordance with 401 KAR 50:055, General compliance requirements. Testing must also be conducted in accordance with General Provisions G.5 of this permit.

f. Terms and conditions in this permit established pursuant to the construction authority of 401 KAR 51:017 or 401 KAR 51:052 shall not expire.

5. Testing Requirements

a. Pursuant to 401 KAR 50:045 Section 2, a source required to conduct a performance test shall submit a completed Compliance Test Protocol form, DEP form 6028, or a test protocol a source has developed for submission to other regulatory agencies, in a format approved by the cabinet, to the Division's Frankfort Central Office a minimum of sixty (60) days prior to the scheduled test date. Pursuant to 401 KAR 50:045, Section 7, the Division shall be notified of the actual test date at least Thirty (30) days prior to the test.

b. Pursuant to 401 KAR 50:045 Section 5, in order to demonstrate that a source is capable of complying with a standard at all times, any required performance test shall be conducted under normal conditions that are representative of the source's operations and create the highest rate of emissions. If [When] the maximum production rate represents a source's highest emissions rate and a performance test is conducted at less than the maximum production rate, a source shall be limited to a production rate of no greater than 110 percent of the average production rate during the performance tests. If and when the facility is capable of operation at the rate specified in the application, the source may retest to demonstrate compliance at the new production rate. The Division for Air Quality may waive these requirements on a case-by-case basis if the source demonstrates to the Division's satisfaction that the source is in compliance with all applicable requirements.

c. Results of performance test(s) required by the permit shall be submitted to the Division by the source or its representative within forty-five days or sooner if required by an applicable standard, after the completion of the fieldwork.

SECTION G - GENERAL PROVISIONS (CONTINUED)

6. Acid Rain Program Requirements

   a. If an applicable requirement of Federal Statute 42 USC 7401 through 7671q (the Clean Air Act) is more stringent than an applicable requirement promulgated pursuant to Federal Statute 42 USC 7651 through 7651o (Title IV of the Act), both provisions shall apply, and both shall be state and federally enforceable.

   b. The permittee shall comply with all applicable requirements and conditions of the Acid Rain Permit and the Phase II permit application (including the Phase II NOx compliance plan and averaging plan, if applicable) incorporated into the Title V permit issued for this source. The source shall also comply with all requirements of any revised or future acid rain permit(s) issued to this source.

7. Emergency Provisions

   a. Pursuant to 401 KAR 52:020 Section 24(1), an emergency shall constitute an affirmative defense to an action brought for the noncompliance with the technology-based emission limitations if the permittee demonstrates through properly signed contemporaneous operating logs or relevant evidence that:
      (1) An emergency occurred and the permittee can identify the cause of the emergency;
      (2) The permitted facility was at the time being properly operated;
      (3) During an emergency, the permittee took all reasonable steps to minimize levels of emissions that exceeded the emissions standards or other requirements in the permit; and
      (4) Pursuant to 401 KAR 52:020, 401 KAR 50:055, and KRS 224.01-400, the permittee notified the Division as promptly as possible and submitted written notice of the emergency to the Division when emission limitations were exceeded due to an emergency. The notice shall include a description of the emergency, steps taken to mitigate emissions, and corrective actions taken.
      (5) This requirement does not relieve the source of other local, state or federal notification requirements.

   b. Emergency conditions listed in General Condition G.7.a above are in addition to any emergency or upset provision(s) contained in an applicable requirement [401 KAR 52:020, Section 24(3)].

   c. In an enforcement proceeding, the permittee seeking to establish the occurrence of an emergency shall have the burden of proof [401 KAR 52:020, Section 24(2)].

8. Ozone Depleting Substances

   a. The permittee shall comply with the standards for recycling and emissions reduction pursuant to 40 CFR 82, Subpart F, except as provided for Motor Vehicle Air Conditioners (MVACs) in Subpart B:
      (1) Persons opening appliances for maintenance, service, repair, or disposal shall comply with the required practices contained in 40 CFR 82.156.

SECTION G - GENERAL PROVISIONS (CONTINUED)

(2) Equipment used during the maintenance, service, repair, or disposal of appliances shall comply with the standards for recycling and recovery equipment contained in 40 CFR 82.158.

(3) Persons performing maintenance, service, repair, or disposal of appliances shall be certified by an approved technician certification program pursuant to 40 CFR 82.161.

(4) Persons disposing of small appliances, MVACs, and MVAC-like appliances (as defined at 40 CFR 82.152) shall comply with the recordkeeping requirements pursuant to 40 CFR 82.166

(5) Persons owning commercial or industrial process refrigeration equipment shall comply with the leak repair requirements pursuant to 40 CFR 82.156.

(6) Owners/operators of appliances normally containing 50 or more pounds of refrigerant shall keep records of refrigerant purchased and added to such appliances pursuant to 40 CFR 82.166.

b. If the permittee performs service on motor (fleet) vehicle air conditioners containing ozone-depleting substances, the source shall comply with all applicable requirements as specified in 40 CFR 82, Subpart B, *Servicing of Motor Vehicle Air Conditioners*.

9. Risk Management Provisions

a. The permittee shall comply with all applicable requirements of 401 KAR Chapter 68, Chemical Accident Prevention, which incorporates by reference 40 CFR Part 68, Risk Management Plan provisions. If required, the permittee shall comply with the Risk Management Program and submit a Risk Management Plan to:

RMP Reporting Center
P.O. Box 1515
Lanham-Seabrook, MD 20703-1515.

b. If requested, submit additional relevant information to the Division or the U.S. EPA.

SECTION H - ALTERNATE OPERATING SCENARIOS

None

SECTION I - COMPLIANCE SCHEDULE

None

SECTION J – ACID RAIN

TITLE IV PHASE II ACID RAIN

ACID RAIN PERMIT CONTENTS

1) Statement of Basis

2) SO_2 allowances allocated under this permit and NO_x requirements for each affected unit.

3) Comments, notes and justifications regarding permit decisions and changes made to the permit application forms during the review process, and any additional requirements or conditions.

4) The permit application submitted for this source. The owners and operators of the source must comply with the standard requirements and special provisions set forth in the Phase II Application and the Phase II NO_x Compliance Plan.

5) Summary of Actions

- **Statement of Basis:**

Statutory and Regulatory Authorities: In accordance with KRS 224.10-100 and Titles IV and V of the Clean Air Act, the Kentucky Environmental and Public Protection Cabinet, Division of Air Quality issues this permit pursuant to 401 KAR 52:020, Permits, 401 KAR 52:060, Acid Rain Permit, and Federal Regulation 40 CFR 76.. (Emission Unit 1 only)

SECTION J – ACID RAIN (CONTINUED)

PERMIT (Conditions)

Plant Name: Louisville Gas & Electric Company
Affected Emission Unit: 1

1. SO_2 Allowance Allocations and NO_x Requirements for the affected Emission Unit:

SO_2 Allowances	**Year**				
	2008	2009	2010	2011	2012
Tables 2, 3 or 4 of 40 CFR 73	9,634*	9,634*	9,654*	9,654*	9,654*

NO_x Requirements	
NO_x Limits	Pursuant to 40 CFR 76, the Kentucky Division for Air Quality approves the NO_x Early Reduction Plan for this unit. This plan is effective for calendar year 2003 through 2008. Under this NO_x compliance plan, this emission Unit's annual average NO_x emission rate for each year, determined in accordance with 40 CFR 75, shall not shall not exceed the applicable emission limitation, under 40 CFR 76.5, of 0.45 lb/MMBtu for tangentially fired boiler. If the emission unit is in compliance with its applicable emission limitation for each year of the plan, then the emission unit is not subject to the applicable limitation, under 40 CFR 76.7 (a)(1), of 0.40 lb/MMBtu until calendar year 2008. In addition to the described NO_x compliance plan, this emission unit shall comply with all other applicable requirements of 40 CFR 76, including the duty to reapply for a NO_x compliance plan and requirements covering excess emissions. In accordance with 40 CFR 72.40(b)(2), approval of the averaging plan shall be final only when all affected organizations have also approved this averaging plan.

* The number of allowances allocated to Phase II affected emission units by U. S. EPA may change under 40 CFR 73. In addition, the number of allowances actually held by an affected source in a emission unit may differ from the number allocated by U.S.EPA. Neither of the aforementioned condition does not necessitate a revision to the emission unit SO_2 allowance allocations identified in this permit (See 40 CFR 72.84).

SECTION J – ACID RAIN (CONTINUED)

PERMIT (Conditions)

Plant Name: Louisville Gas and Electric Company
Affected Emission Units: 25- 30 (TC5-TC10)

- **SO_2 Allowance Allocations and NO_x Requirements for the affected emission unit:**

SO_2 Allowances	**Year**				
	2008	2009	2010	2011	2012
Tables 2, 3 or 4 of 40 CFR 73	0*	0*	0*	0*	0*

NO_x Requirements	
NO_x Limits	N/A**

* For newly constructed emission units, there are no SO_2 allowances per USEPA Acid Rain Program

** These emission units currently do not have applicable NO_x limits set by 40 CFR, part 76**.**

SECTION J – ACID RAIN (CONTINUED)

PERMIT (Conditions)

Plant Name: Louisville Gas and Electric Company
Affected Emission Unit: 31 (Unit 2)

- **SO_2 Allowance Allocations and NO_x Requirements for the affected emission unit:**

SO_2 Allowances	**Year**				
	2008	2009	2010	2011	2012
Tables 2, 3 or 4 of 40 CFR 73	0*	0*	0*	0*	0*

NO_x Requirements	
NO_x Limits	N/A**

* For newly constructed emission unit, there are no SO_2 allowances per USEPA Acid Rain Program

** This emission unit currently does not have applicable NO_x limits set by 40 CFR, part 76**.**

SECTION J – ACID RAIN (CONTINUED)

2. Comments, Notes, and Justifications:

1. Affected emission units are one (1) tangentially fired boiler and six combustion turbines, and one (1) supercritical PC boiler.

2. A CAIR permit application was submitted on July 3, 2007, including the existing emission unit.

3. All previously issued Acid Rain permits are hereby null and void

4. Nitrogen Oxide Compliance Plan for the facility remains unchanged since September 19, 1996.

4. Initial SO Compliance Plan was submitted with AR-96-007 application.

3. Permit Application:

The Phase II Permit Application, and the Phase II NO_x Early Reduction Plan are part of this permit and the source must comply with the standard requirements and special provisions set forth in the Phase II Application, the revised Phase II NO_x Compliance Plan, and the revise Phase II NO_x Early Reduction Plan.

4. Summary of Actions:

Previous Actions:

1. Draft Phase II Permit (# AR-96-007) including SO_2 compliance was issued for public comments on September 19, 1996.

2. Final Phase II Permit (# AR-96-007) including SO_2 compliance plan was issued on December 19, 1996.

3. Draft Phase II Permit (# A-98-011) was advertised in the 1998 revised SO_2 allowance allocations and NO_x emissions standard for public comment on December 8, 1998.

4. Final Phase II Permit (# A-98-011) was issued with the 1998 revised SO_2 allowance allocations and NO_x emissions standards.

5. Draft Phase II Permit (# V-02-043) has been issued with the revised SO_2 allowance allocations and NO_x Early Reduction Plan. Draft permit relates to the Combustion turbines permitted in June 22, 2001.

6. Final Permit revised with the revised SO_2 allowance allocation and NO_x Early Reduction Plan.

7. Draft Revised Title V (# V-02-043R3) with Acid Rain Permit advertised for public comments.

8. Proposed Permit (# V-02-043R3) issued as a revised permit V-02-043R3 with Acid Rain Permit.

Present Action:

1. Renewal Draft Title V with Acid Rain Permit is being advertised for public comments.

SECTION K – Clean Air Interstate Rule (CAIR)

1) Statement of Basis

Statutory and Regulatory Authorities: In accordance with KRS 224.10-100, the Kentucky Environmental and Public Protection Cabinet issues this permit pursuant to 401 KAR 52:020 Title V permits, 401 KAR 51:210, CAIR NOx Annual Trading Program and 401 KAR 51:220, CAIR NOx Ozone Trading Program.

2) CAIR Application

The CAIR application for eight electrical generating units was submitted to the Division and received on July 03, 2007. Requirements contained in that application are hereby incorporated into and made part of this CAIR Permit. Pursuant to 401 KAR 52:020, Section 3, the source shall operate in compliance with those requirements.

3) Comments, notes, justifications regarding permit decisions and changes made to the permit application forms during the review process, and any additional requirements or conditions.

The Affected units are two pulverized coal-fired steam generators (Emission Units 1 and 31) and six (6) 150-megeawatt natural gas fired simple cycle combustion turbines (Emission Units 25 through 30) used for peak electrical power production. Each unit has a nameplate capacity to generate greater than 25 megawatts of electricity, which is offered for sale. The units use coal and natural gas as fuel source, and are authorized as base load electric generating units.

4) Summary of Actions

The CAIR Permit is being issued as part of the Title V permit for this source. Public, affected state, and U.S. EPA review will follow procedures specified in 401 KAR 52:100.